TRUPCR®

PRODUCT BROCHURE

TRUPCR® MOLECULAR DIAGNOSTIC KITS

REAL-TIME PCR BASED

INFECTIOUS DISEASES (PANELS)

Flu Panel with RSV
Gastrointestinal Panel 1
Meningitis Panel
Neuro Panel
Respiratory Pathogen Panel
Sepsis AMR Panel
STD Panel
Tropical Fever Assays
Tropical Fever Panel
UTI ID Panel

ANTIMICROBIAL RESISTANCE (AMR)

AST Panel
Carbapenem Resistance Detection
ESKAPE ID & AST Panel Kit
MRSA Detection
Rifampicin & Isoniazid Resistant MTB Detection
UTI AST Panel
VRE Detection

INFECTIOUS DISEASES (INDIVIDUAL MARKERS)

HBV Viral Load
HCV Viral Load
HIV Viral Load
MTBC Detection

WOMEN'S HEALTH

HPV 16 & 18 Detection
HPV HR with 16 &18 Differentiation (Single tube)
HPV HR and LR with 16 & 18 Differentiation
HPV HR Genotyping
HPV High Risk Genotyping Plus

ONCOLOGY (PANELS)

Acute Leukemia Panel
ALL Comprehensive Panel
AML Comprehensive Panel
Colorectal Cancer Mutations Panel
MPN Mutations Panel

ONCOLOGY (INDIVIDUAL MARKERS)

BCR-ABL1 Quantitative
EGFR Mutations Detection
IDH1/2 Mutations Detection & Differentiation
MYD88 Mutations Detection

PHARMACOGENOMICS (PGX)

DPYD Mutations Detection
TPMT Mutations Detection
NUDT15 Mutations Detection

HUMAN GENETICS

HLA-B27 Detection
MTHFR Mutations Detection

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TRUPCR® FLU PANEL WITH RSV DETECTION KIT

FLU WITH RSV TESTING

Influenza, known as the flu, is a respiratory infection caused by a virus. WHO indicated that every year 290,000 - 600,000 influenza-associated deaths occur[1]. The most common influenza A viruses currently infecting humans are H1N1 and H3N2. RSV is another major cause of human respiratory infections, particularly among younger children causing bronchiolitis, pneumonia or croup. TRUPCR® Flu Panel with RSV testing can help rule out other illnesses and reduce the chances of people using unnecessary antibiotics, while increasing the chances that they will receive anti-viral therapy early in the illness, when it is most effective.

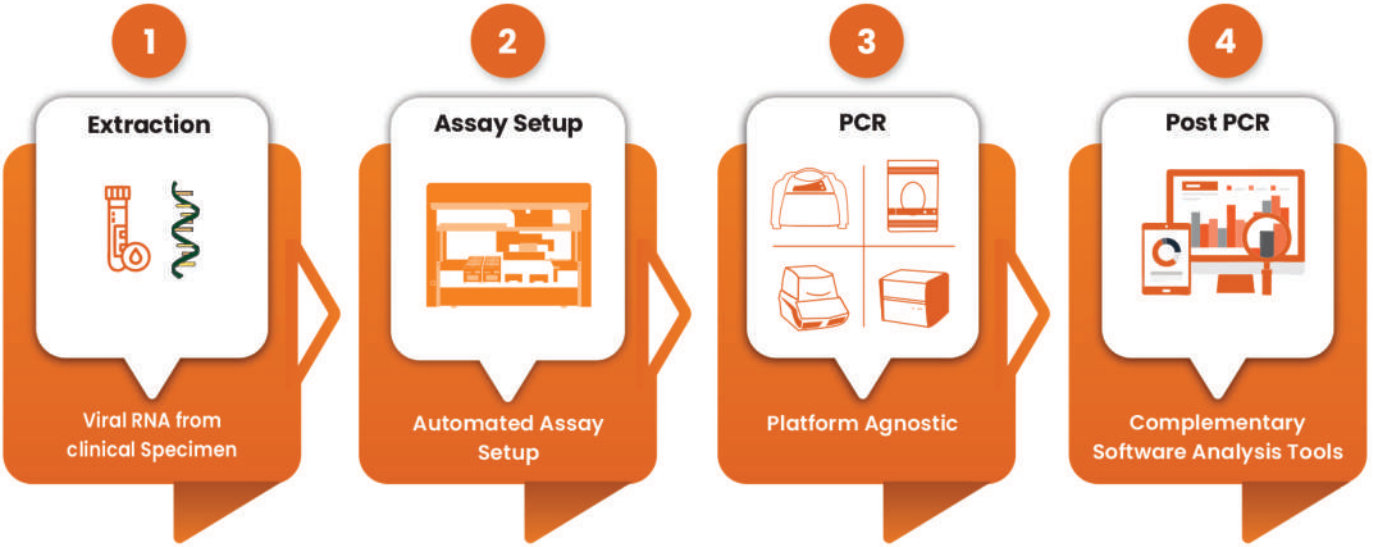
Type A Influenza virus	FAM
Type B Influenza virus	Texas Red
Respiratory Syncytial virus	HEX

Pandemic Influenza H1 virus	FAM
H3 Influenza virus	Texas Red
RNaseP gene (IC)	HEX

SOLUTION BY TRUPCR®

TRUPCR® Flu Panel with RSV Detection Kit is a multiplex Real Time PCR assay which is intended for qualitative detection & differentiation of viruses causing flu from human respiratory samples and viral cultures.

TRUPCR® Flu Panel with RSV Detection Kit includes two tubes assay targeting five major viruses. This assay is based on oligonucleotide hydrolysis principle which allows higher specificity and sensitivity.



1 - https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/burden-of-disease,

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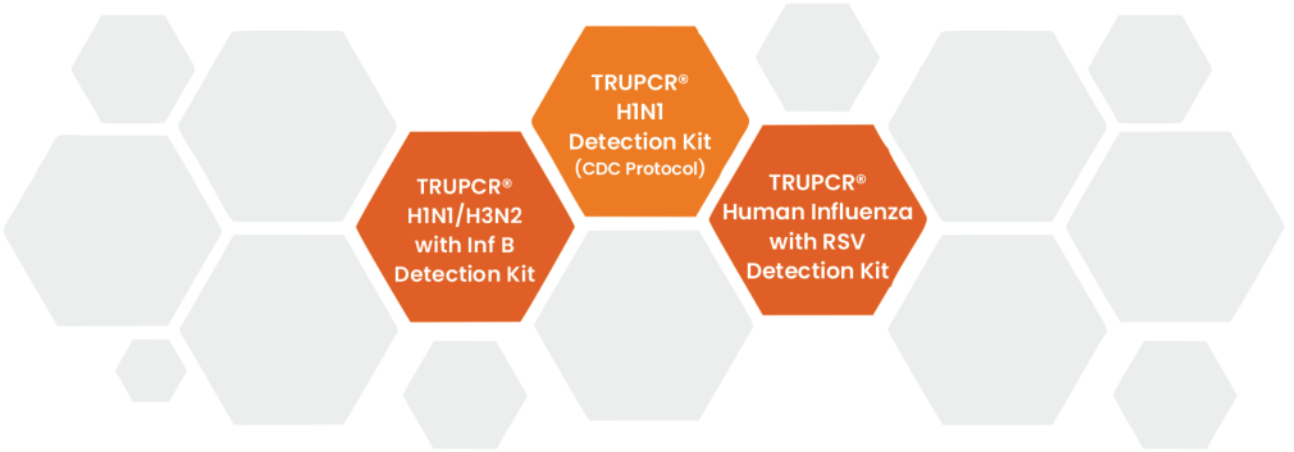
TRUPCR® FLU PANEL WITH RSV DETECTION KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Respiratory specimens (broncheoalveolar lavage, tracheal aspirates, sputum, nasopharyngeal or oropharyngeal aspirates or washes, and nasopharyngeal or oropharyngeal swabs) and viral cultures
REACTION VOLUME	25µl in each tube
REACTION TIME	100-140 Minutes PCR run
INTERNAL CONTROL	*RNaseP* gene as endogenous internal control is included in this kit to keep a check on PCR as well as extraction
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

OTHER TRUPCR® INFLUENZA TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Flu Panel with RSV Detection Kit	3B221	48
	3B222	96
TRUPCR® Viral RNA Extraction Kit	3B214V	50
	3B213V	100

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TRUPCR® GASTROINTESTINAL PANEL I KIT

NEED

Diarrhoea disease is the second leading cause of death in children under five years old, and was responsible for the deaths of 3,70,000 children in 2019[1]. For most people, severe dehydration and fluid loss were the main causes of diarrhoea deaths. Other causes such as bacterial infections are likely to account for an increasing proportion of all diarrhea - associated deaths. Not only young children, but the elderly, and immunocompromised patients are also at greatest risk for more severe disease and complications. Outbreak of gastrointestinal infections are a serious concern in the hospital environment as well.

Salmonella	FAM
Shigella	VIC
Compylobacter	Cy5
VTEC-E. coli	Cy5.5
IC	Hex

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

The range of pathogens that can cause bacterial GI infections requires classical detection methods for e.g., culture or antigen in order to target and identify the causative agent. These classical methods suffer from variable specificity and sensitivity, higher turn around time and are often poorly utilized due to a lack of physician understanding of the intended use for each method. Multiplex molecular tests allow for several of the most common GI pathogens to be tested at once, while providing improved analytical specificity and sensitivity versus most classical methodologies.

SOLUTION BY TRUPCR®

TRUPCR® Gastrointestinal Panel I Kit is a Real-Time amplification test for the qualitative detection and differentiation of *Salmonella* spp., *Shigella* spp., *Campylobacter* spp. and Verotoxin producing *E.coli* (VTEC) in stool samples. An endogenous internal control has been integrated into the kit in order to check PCR inhibition. The different targets are detected with the help of different dyes. The kit is based on amplification of highly conserved regions of *Salmonella* spp., *Shigella* spp., *Campylobacter* spp. and VTEC *E. coli* which provides detection of major diarrhea causing pathogens in clinical samples.

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Automated Assay Setup
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 90-100 minutes after PCR Start

[1] https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease

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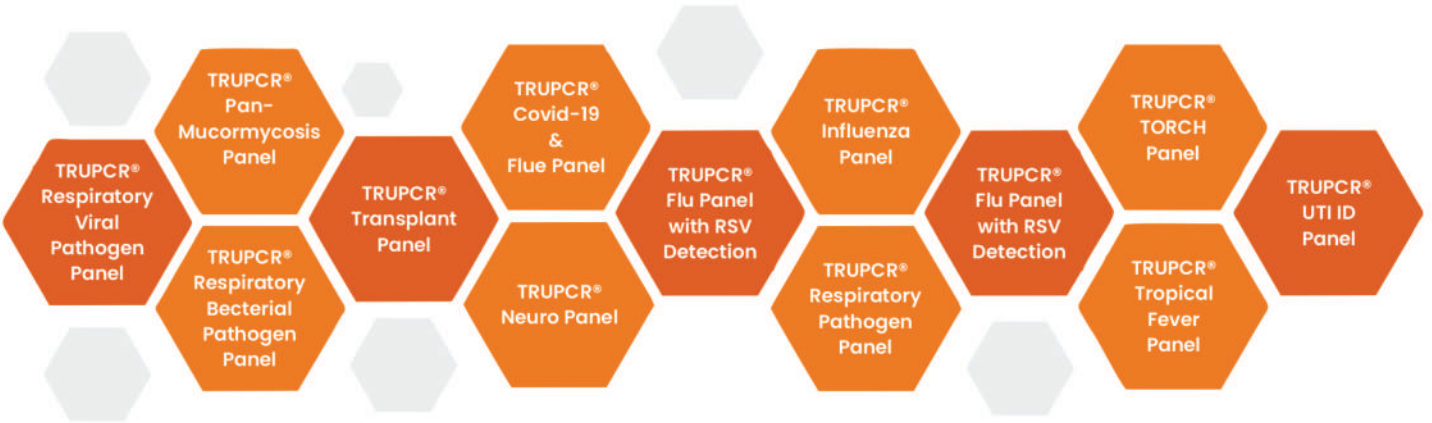
TRUPCR® GASTROINTESTINAL PANEL I KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Stool Specimen
CLINICAL VALIDATION	Validated on more than 300 clinical samples
TARGET REGIONS	Conserved regions of the target pathogens
REACTION VOLUME	25 µl in each tube
LOD DATA	1000 CFU/ml
COMPATIBLE INSTRUMENTS	Rotor-Gene Q, Bio-Rad CFX96, QuantStudio® 5

OTHER TRUPCR® INFECTIOUS DISEASE PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Gastrointestinal Panel I Kit	3B379	48
TRUPCR® Gastrointestinal Panel I Kit	3B380	96

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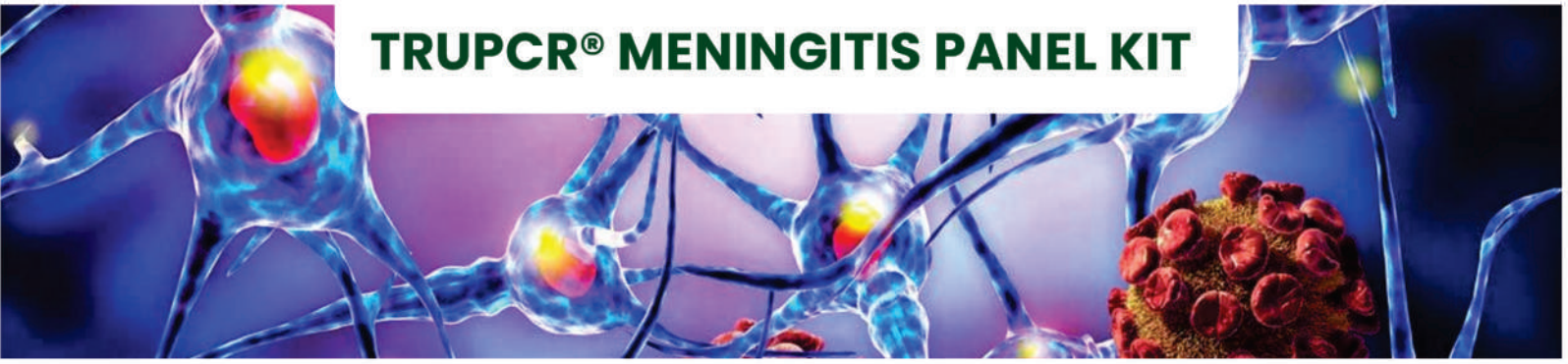
TRUPCR® MENINGITIS PANEL KIT



NEED

Meningitis is a life-threatening condition caused by inflammation of the protective membranes surrounding the brain and spinal cord, most often due to bacterial and/or viral infections. Acute bacterial meningitis—primarily caused by *Neisseria meningitidis, Streptococcus pneumoniae, Haemophilus influenzae, Streptococcus agalactiae, Mycobacterium tuberculosis* complex, & Non-*tuberculosis Mycobacterium*—is among the most severe forms, capable of triggering sudden epidemics, leading to death within 24 hours, and leaving one in five survivors with lifelong disabilities. In 2019 alone, meningitis was responsible for approximately 250,000 deaths worldwide. While bacterial meningitis is widely recognized for its severity, viral pathogens are equally important contributors to neuroinfectious diseases and warrant equal clinical attention. Enteroviruses, Human herpesvirus 6 & 7, Herpes simplex virus 1 & 2, Epstein-Barr virus, Varicella-zoster virus, & Cytomegalovirus can contribute to meningitis or encephalitis, particularly in pediatric and immunocompromised patients. Given the rapid progression and severe outcomes of both bacterial and viral neuroinfections, early and accurate detection of causative pathogens is vital. Timely diagnosis through Real-Time PCR (considered as the gold standard), not only improves patient survival and recovery but also enables targeted antiviral or antibiotic therapy, reducing long-term complications and preventing outbreaks.

SOLUTION BY TRUPCR®

TRUPCR® Meningitis Panel Kit is an *in vitro* nucleic acid amplification assay for the qualitative detection and differentiation of 12 viruses, 8 bacterial & 1 fungal nucleic acid on Real-Time PCR. An endogenous internal control is incorporated into the kit to verify the quality of samples, quality of extracted nucleic acid, amplification procedure and possible presence of inhibitors, which may cause false negative results. This design of the kit makes it highly reliable. This assay is based on oligonucleotide hydrolysis principle which allows higher specificity and sensitivity. This is a single step detection assay where different targets are detected with the help of 4 different dyes (FAM/Green, HEX/VIC/Yellow, Texas Red/ROX/Orange & Cy5/Red).

01	Human adenovirus	FAM
	Enterovirus	HEX
	Human Parechovirus	Texa Red
	Endogenous internal control	Cy5
02	Herpes simplex virus 1	FAM
	Herpes simplex virus 2	HEX
	Mumps Virus	Tex Red
	Endogenous internal control	Cy5
03	Human Parvovirus B19	FAM
	Epstein-Barr Virus	HEX
	Varicella Zoster virus	Tex Red
	Endogenous internal control	Cy5
04	Human Cytomegalovirus	FAM
	Human Herpesvirus 6	HEX
	Human Herpesvirus 7	Tex Red
	Endogenous internal control	Cy5
05	*Haemophilus influenzae*	FAM
	Neisseria meningitidis	HEX
	Escherichia coli	Tex Red
	Endogenous internal control	Cy5
06	*Streptococcus agalactiae*	FAM
	Streptococcus pneumonia	HEX
	Listeria monocytogenes	Tex Red
	Endogenous internal control	Cy5
07	Non-*tuberculosis Mycobacterium*	FAM
	Mycobacterium tuberculosis complex	HEX
	Cryptococcus neoformans/gattii	Tex Red
	Endogenous internal control	Cy5

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Automated Assay Setup
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 90-100 minutes after PCR Start

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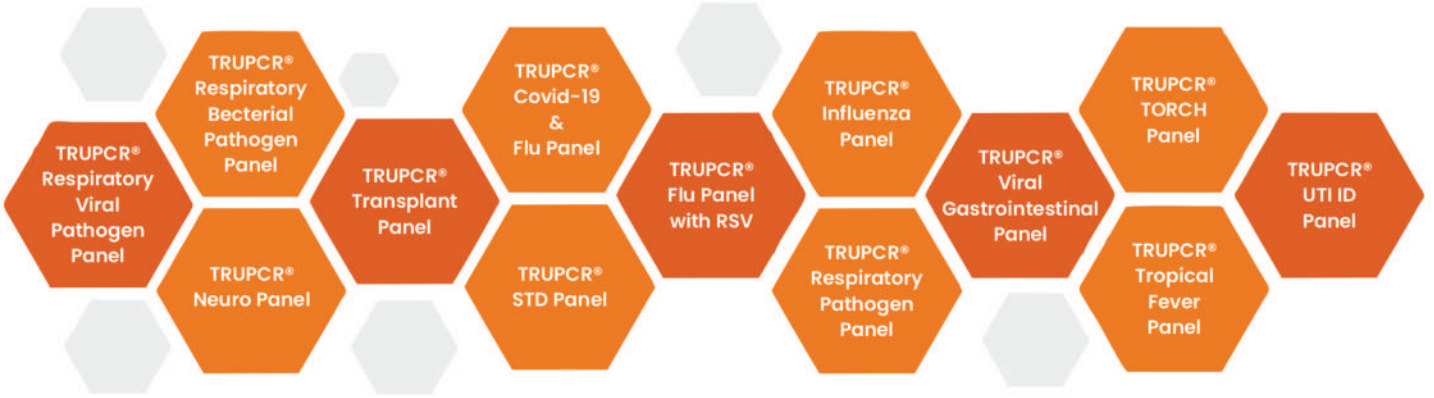
TRUPCR® MENINGITIS PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total nucleic acid from Cerebrospinal fluid (CSF) samples of human origin
CLINICAL VALIDATION	Validated on more than 500 clinical samples
TARGET REGIONS	Conserved regions of the genome of each pathogen
REACTION VOLUME	25 µl in each tube
LOD DATA	Viral Pathogens - 700 IU/ml, Bacterial & Fungal Pathogens - 500 CFU/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500, Applied Biosystems™ QuantStudio 5, Rotor-Gene Q, Bio-Rad CFX96

OTHER TRUPCR® INFECTIOUS DISEASE PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Meningitis Panel Kit	3B353	48
	3B354	96
TRUPCR® Total Nucleic Acid Extraction Kit	3B347	50
	3B348	100

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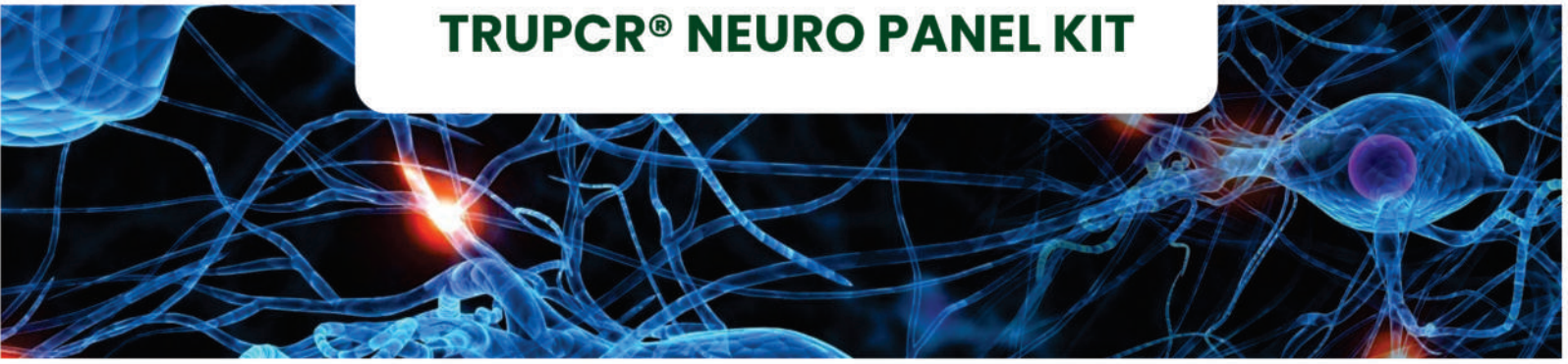
TRUPCR® NEURO PANEL KIT



NEED

Neuro infectious diseases are a major cause of morbidity and mortality worldwide and have a sizable effect on local health care systems and economies[1]. The outcome of viral infections varies according to the pathogen, the availability of specific antiviral therapy, and the management of potential complications, especially in pediatric patients. Entero virus and human herpesvirus (HHV) infections were found to be associated with amyotrophic lateral sclerosis (ALS) and herpes simplex virus type 1 with Alzheimer's. Similarly, Epstein-Barr virus, varicella-zoster virus, cytomegalovirus, HHV-6, and HHV-7 with multiple sclerosis. Early diagnosis of Neuro pathogens is required for those patients who require hospitalization for fluid administration and pain relief, while others can be safely treated at home. Exceptions include varicella and herpes simplex virus, which, if severe, are treated with antiviral agents.

01	Human adenovirus	FAM
	Enterovirus	HEX
	Human Parechovirus	Texa Red
02	Herpes simplex virus 1	FAM
	Herpes simplex virus 2	HEX
	Endogenous IC	Tex Red
03	Human Parvovirus B19	FAM
	Epstein-Barr Virus	HEX
	Varicella Zoster virus	Tex Red
04	Human Cytomegalovirus	FAM
	Human Herpesvirus 6	HEX
	Human Herpesvirus	Tex Red

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

SOLUTION BY TRUPCR®

TRUPCR® Neuro Panel Kit is an in vitro nucleic acid amplification assay for qualitative detection and differentiation of 11 different virus nucleic acid on Real-Time PCR. An endogenous internal control is incorporated into the system to verify the quality of samples, quality of extracted nucleic acid, amplification procedure and possible presence of inhibitors, which may cause false negative results and this design, makes this kit highly reliable. This assay is based on oligonucleotide hydrolysis principle which allows higher specificity and sensitivity. This is a single step detection assay where different targets are detected with the help of three different dyes (FAM/Green, HEX/VIC/Yellow & Texas Red/ROX/Orange).

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Automated Assay Setup
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 90-100 minutes after PCR Start

[1] ncbi.nlm.nih.gov/books/NBK525302/

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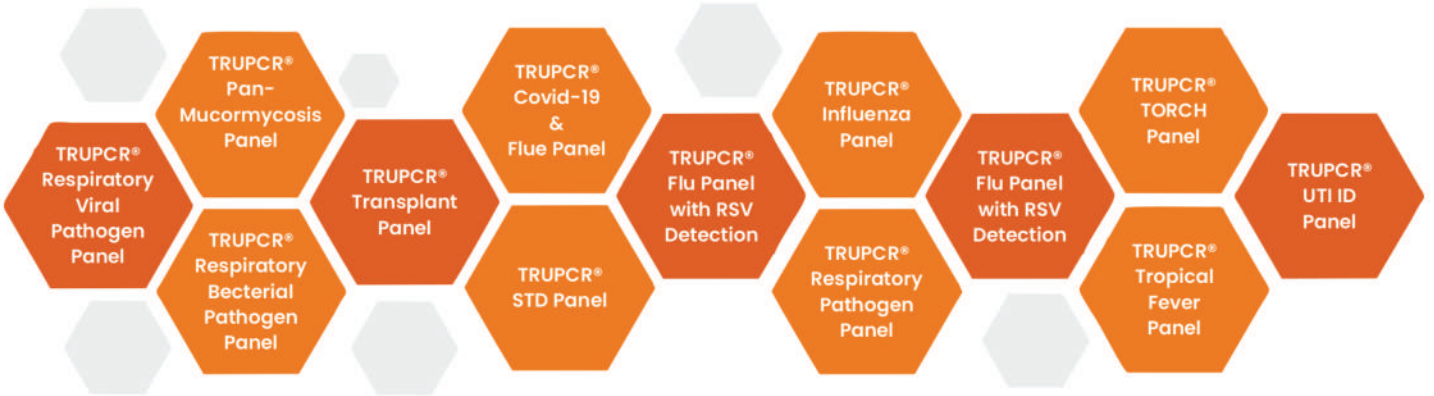
TRUPCR® NEURO PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total nucleic acid from Cerebrospinal fluid (CSF) samples of human origin
CLINICAL VALIDATION	Validated on more than 500 clinical samples
TARGET REGIONS	Conserved regions of the genome of each pathogen
REACTION VOLUME	25 µl in each tube
LOD DATA	Human adenovirus = 1.0 copies/µl, Enterovirus = 1.0 copies/µl, Human Parechovirus = 1.0 copies/µl, Herpes simplex virus 1 = 0.5 copies/µl, Herpes simplex virus 2 = 0.5 copies/µl, Human Parvovirus B19 = 100 IU/ml, Epstein-Barr virus = 1.0 copies/µl, Varicella Zoster virus = 1.0 copies/µl, Human Cytomegalovirus = 125 IU/ml, Human Herpes virus 6 = 1.0 copies/µl, Human Herpes virus 7 = 1.0 copies/µl
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, Applied Biosystems™ StepOne series, Applied Biosystems™ QuantStudio® series, Rotor-Gene Q, Bio-Rad CFX96

OTHER TRUPCR® INFECTIOUS DISEASE PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Neuro Panel Kit	3B240	48
TRUPCR® Neuro Panel Kit	3B239	96

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TRUPCR® RESPIRATORY PATHOGEN PANEL KIT

RESPIRATORY INFECTIOUS DISEASES

According to the WHO, respiratory infectious diseases take first place in the ranking of the burden of disease measured by years lost through death or disability. Lower respiratory tract infections represent the third leading cause of death in the world. Respiratory infectious diseases are responsible for approximately 70% of under-five years of childhood morbidities in developing countries. Every year, influenza leads to respiratory tract infections in 5–15% of the population and severe illness in 3–5 million people[1]. It accounts for 3%–5% of deaths in adults. Rapid and accurate identification of the causative agent of respiratory tract infections may improve patient management by informing timely and effective antibiotic or antiviral therapy, preventing secondary spread of infection, shortening hospital stays and reducing costs of unnecessary ancillary tests.

SOLUTION BY TRUPCR®

TRUPCR® Respiratory Pathogen Panel Kit accurately identified 31 different pathogens from respiratory specimens (BAL/Tracheal aspirate/Sputum/Nasopharyngeal aspirate in VTM vial) using Real time PCR. The human *RNaseP* gene serves as an endogenous internal control for human nucleic acid, also included in this kit.

01	*Staphylococcus aureus*	FAM
	Streptococcus pneumoniae	HEX
	Klebsiella pneumoniae	Texas Red
	Mycoplasma pneumoniae	Cy5
02	*Salmonella spp.*	FAM
	Streptococcus pyogenes	HEX
	Bordetella spp.	Texas Red
	Chlamydia pneumonia	Cy5
03	*Streptococcus agalactiae*	FAM
	Acinetobacter baumannii	HEX
	Pseudomonas aeruginosa	Texas Red
	Legionella pneumophila	Cy5
04	*Haemophilus influenzae*	FAM
	Moraxella catarrhalis	HEX
	Human parechovirus	Texas Red
	Human coronavirus	Cy5
05	Human Parainfluenza 1 Virus	FAM
	Human Parainfluenza 2 Virus	HEX
	Human Parainfluenza 3 Virus	Texas Red
	Human Parainfluenza 4 Virus	Cy5
06	Type A Influenza Virus	FAM
	Enterovirus	HEX
	H3N2 Virus	Texas Red
	Human Metapneumo Virus	Cy5
07	Pandemic H1 influenza Virus	FAM
	RNaseP Gene	HEX
	Type B Influenza Virus	Texas Red
	Type C Influenza Virus	Cy5
08	Adeno Virus	FAM
	Human Respiratory Syncytial Virus	HEX
	Human Rhino Virus	Texas Red
	Human Boca Virus	Cy5

1 **Extraction**
NA Extraction from wide variety of clinical Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/global-health-estimates-leading-causes-of-dalys

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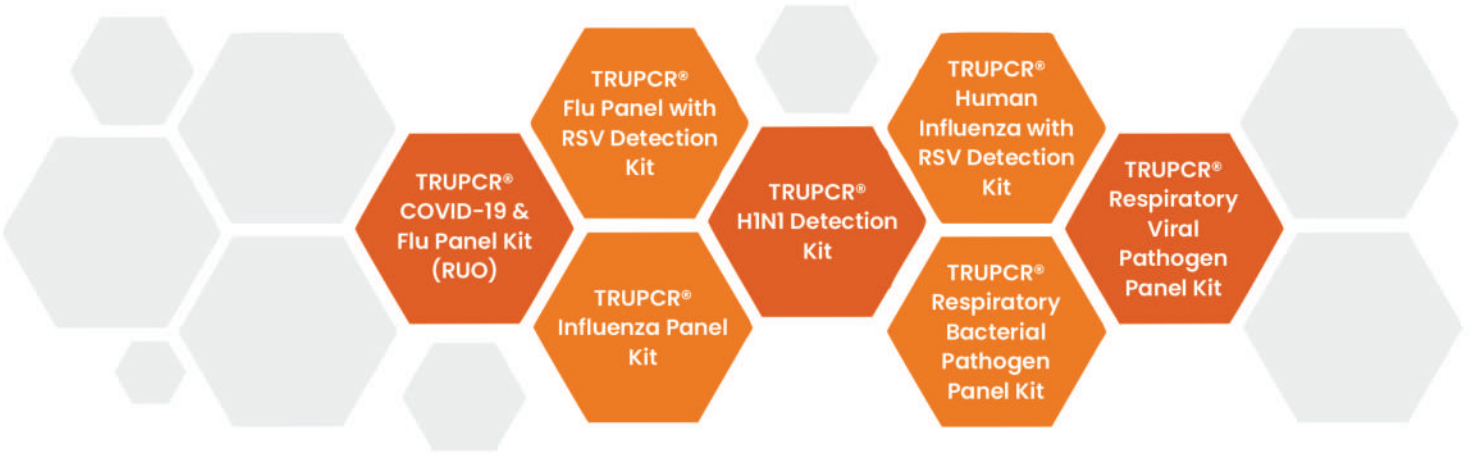
TRUPCR® RESPIRATORY PATHOGEN PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	BAL, Tracheal aspirate, Sputum, Nasopharyngeal aspirate in VTM vial
RUN TIME	100-120 Minutes PCR
REACTION VOLUME	25 µl in each tube
CLINICAL VALIDATION	Validated on more than 1000 clinical samples
LIMIT OF DETECTION	10^3 copies/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Bio-Rad CFX96

OTHER TRUPCR® RESPIRATORY DISEASES PANELS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Respiratory Pathogen Panel Kit	3B287	48
	3B288	96
TRUPCR® Total Nucleic Acid Extraction Kit	3B347	50
	3B348	100

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TRUPCR® SEPSIS PANEL KIT

SEPSIS (Bloodstream Infection)

Sepsis is a life-threatening condition that occurs when the body's immune system has an extreme response to an infection, causing organ dysfunction . It can lead to shock, organ failure, and death if not treated quickly. Anyone can develop sepsis, but newborns, the elderly, pregnant women, and chronically ill individuals are at higher risk. Sepsis is usually caused by bacterial infections but may be the result of other infections such as viruses, parasites or fungi. Drug-resistant pathogens worsen outcomes, driving higher hospital mortality. Preventing infections through hygiene, vaccination, and responsible antibiotic use, along with early diagnosis and timely treatment, are crucial to reduce sepsis deaths worldwide.

01	*Staphylococcus aureus*	FAM
	Streptococcus pneumoniae	HEX
	Klebsiella pneumoniae	Texas Red
02	*Salmonella spp.*	FAM
	Streptococcus pyogenes	HEX
	E. coli	Texas Red
03	*Streptococcus agalactiae*	FAM
	Acinetobacter baumannii	HEX
	Pseudomonas aeruginosa	Texas Red
04	*Haemophilus influenzae (A-F)*	FAM
	Neisseria meningitidis	HEX
	Klebsiella oxytoca	Texas Red
05	*Enterococcus faecalis*	FAM
	Staphylococcus epidermidis	HEX
	Enterococcus faecium	Texas Red
06	*Enterobacter spp.*	FAM
	Listeria monocytogenes	Texas Red
07	*Candida auris*	FAM
	Candida albicans	HEX
	Candida lusitaniae	Texas Red
08	*sul2*	FAM
	dfrA1	Texas Red
	dfrA5	Cy5
09	$bla_{CTX-M\ grp}$	FAM
	bla_{TEM}	Texas Red
	bla_{SHV}	Cy5
10	bla_{KPC}	FAM
	bla_{NDM}	Texas Red
	bla_{VIM}	Cy5
11	bla_{OXA-48}	FAM
	bla_{IMP}	Texas Red
12	*mecA*	FAM
	vanA	Texas Red
	vanB	Cy5

SOLUTION BY TRUPCR®

The TRUPCR® Sepsis Panel Kit is an in vitro nucleic acid amplification test (NAAT) designed for the qualitative **detection and differentiation of 20 clinically relevant pathogens along with 14 antimicrobial resistance (AMR) genes** that confer resistance to key antibiotic classes, including Trimethoprim/Sulfamethoxazole (SXT), Extended-Spectrum Beta-Lactams (ESBLs), Carbapenems, Vancomycin, and Methicillin. The assay enables direct **testing from whole blood or positive blood culture samples** using a Real-Time PCR platform, ensuring rapid and accurate identification. An endogenous internal control targeting human nucleic acid is incorporated to monitor extraction and amplification integrity. Based on hydrolysis probe chemistry, the assay provides high specificity and sensitivity, facilitating timely detection of sepsis-causing pathogens and associated resistance markers.

1 **Extraction**
NA Extraction from whole blood or Positive Blood Culture

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

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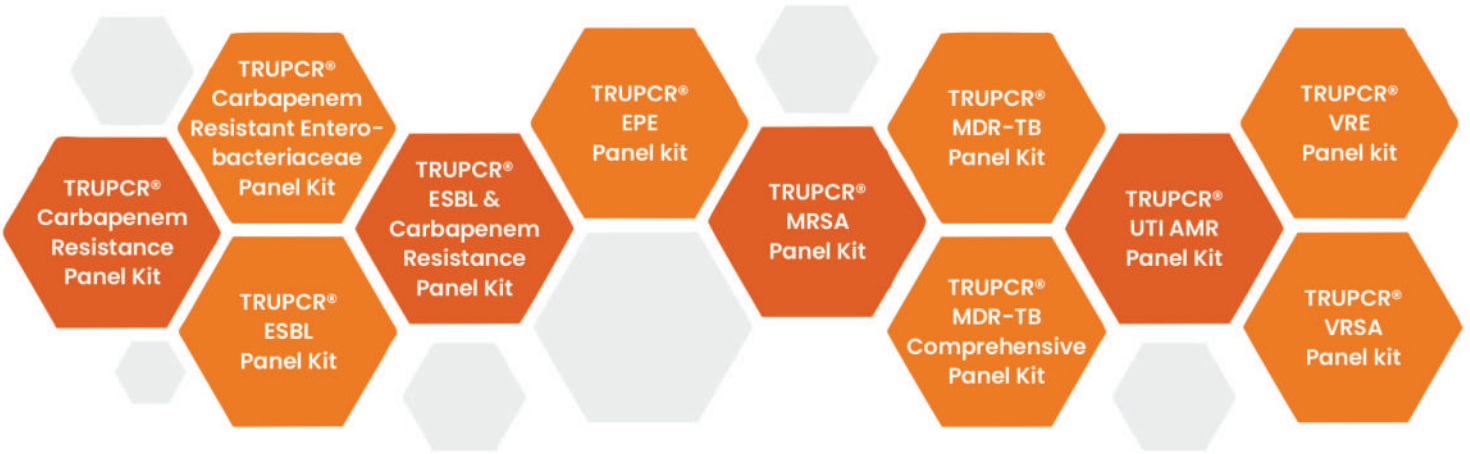
TRUPCR® SEPSIS PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Whole blood and Positive blood culture
RUN TIME	Less than 1 hr
REACTION VOLUME	20 µl in each tube
LIMIT OF DETECTION	10^3 CFU/ML
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE –** ESBL Producing Enterobacteriaceae, **MRSA –** Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB –** Multi Drug Resistant Tuberculosis, **VRE –** Vancomycin Resistant Enterococci, **VRSA –** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® SEPSIS Panel Kit	3B1225	48
	3B1226	96
TRUPCR® Sepsis pathogen DNA Extraction Kit from Direct Blood	3B537	50
	3B538	100
TRUPCR® Bacterial/Fungal DNA Extraction Kit	3B345	50
	3B346	100

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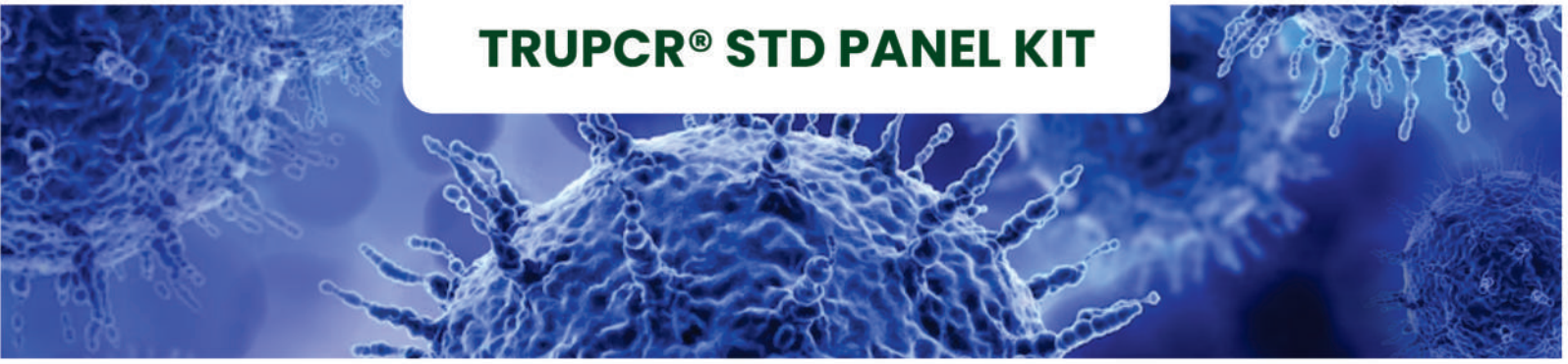
TRUPCR® STD PANEL KIT



NEED

Sexually Transmitted Diseases (STDs) are among the most common Contagious diseases. Each year, 20 million new cases are reported; half of these infections are among people ages 15 to 24 and they can have long-term consequences[1]. In 2019, 1,808,703 cases of Chlamydia trachomatis &, 616,392 cases of gonorrhea were reported to CDC. More than 30 different bacteria, viruses and parasites can be transmitted through sexual activity. STD causes HIV, Herpes, Hepatitis B, Pelvic inflammatory disease, Ectopic pregnancy, Chronic pelvic pain and can damage reproductive organs (rendering infertility). STD may weaken the immune system, leaving individual more vulnerable to other infections.

Chlamydia trachomatis	FAM
Neisseria gonorrhoeae	HEX
Mycoplasma genitalium	Texas Red
Endogenous IC	Cy5

Herpes simplex virus 1	FAM
Herpes simplex virus 2	HEX
Endogenous IC	Cy5

Ureaplasma urealyticum/parvum	FAM
Gardnerella vaginalis	HEX
Trichomonas vaginalis	Texas Red
Endogenous IC	Cy5

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

SOLUTION BY TRUPCR®

TRUPCR® STD Panel Kit is a Real-Time Amplification test for the qualitative detection & differentiation of nine STD causing pathogens from human clinical samples. It includes three tubes assay based on oligonucleotide hydrolysis principle which allows higher specificity and sensitivity.
The different targets are detected with the help of three different dyes (FAM/Green, HEX/VIC/Yellow & Texas Red/ROX/Orange, Cy5/Red). It is fairly common for a person to be infected with more than one STD causing pathogens at the same time. Thus TRUPCR® STD Panel Kit provides detection of multiple STDs at once.

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Automated Assay Setup
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 90-100 minutes after PCR Start

[1] https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)

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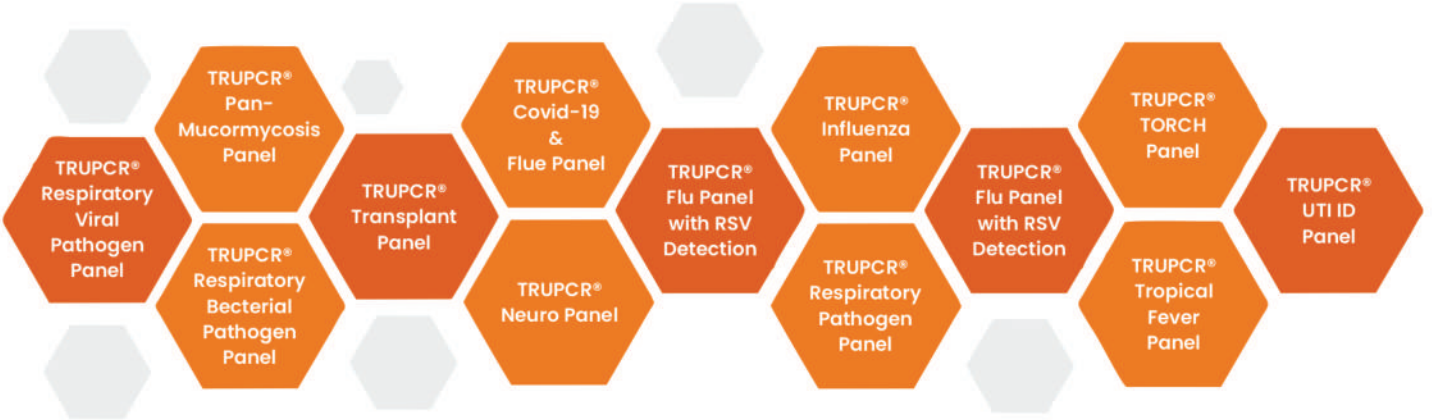
TRUPCR® STD PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Rectal & Genital Swab Specimen, Urine Specimen
CLINICAL VALIDATION	Validated on more than 500 clinical samples
TARGET REGIONS	Conserved regions of the genome of each pathogen
REACTION VOLUME	25 µl in each tube
LOD DATA	Chlamydia trachomatis = $2x10^2$ IFU/ml, Neisseria gonorrhoeae = $2.5x10^2$ CFU/ml, HSV 1 = $5X10^2$ copies/ml, HSV 2 = $5X10^2$ copies/ml, Mycoplasma genitalium = $5x10^2$ copies/ml, Trichomonas vaginalis = $4X10^2$ copies/ml, Gardnerella vaginalis = $1x10^3$ copies/ml, Ureaplasma urealyticum/parvum = $1x10^3$ copies/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, Applied Biosystems™ StepOne series, Applied Biosystems™ QuantStudio® 5, Rotor-Gene Q, Bio-Rad CFX96

OTHER TRUPCR® INFECTIOUS DISEASE PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® STD Panel Kit	3B291	48
TRUPCR® STD Panel Kit	3B292	96

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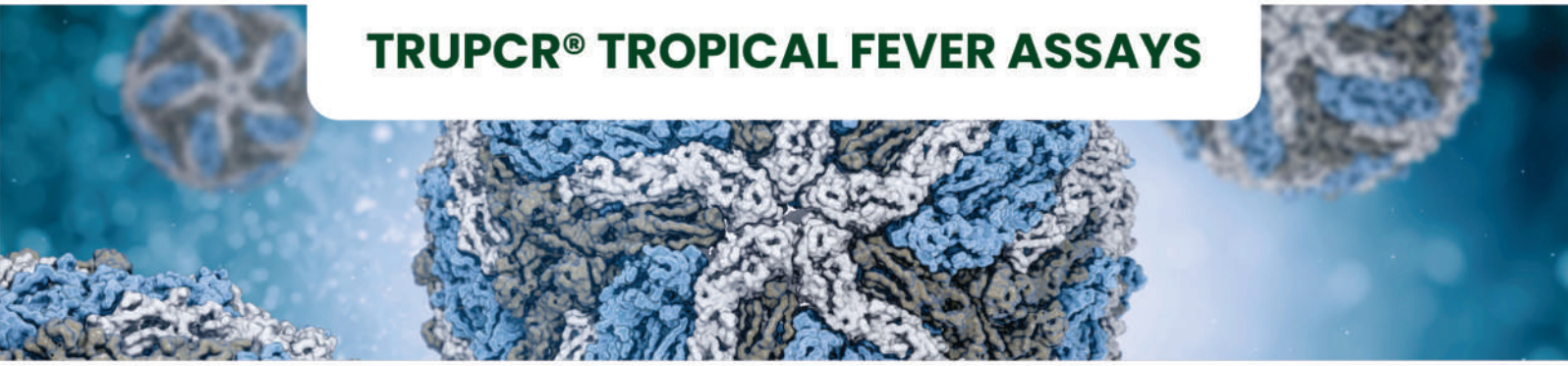


TRUPCR® TROPICAL FEVER ASSAYS

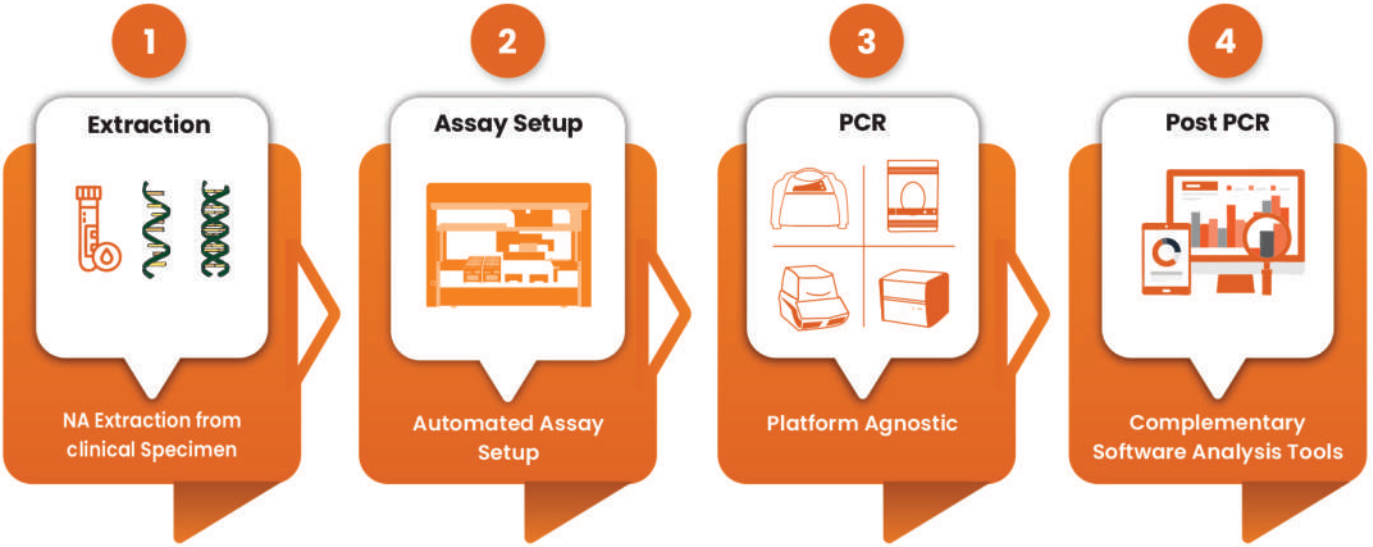
TROPICAL FEVER

Over a billion people—approximately one-sixth of the global population—are affected by tropical diseases, with the majority of cases occurring in tropical and subtropical regions of low- and middle-income countries (WHO, 2023)[1]. These regions have climate conditions favourable to disease vectors, which contribute to the spread of these infections. Tropical diseases are caused by a wide range of pathogens, including viruses (such as Dengue, Zika, and Chikungunya), bacteria (such as *Salmonella* and *Leptospira*), parasites (such as *Plasmodium* species that cause malaria), and fungi.

These fevers leads to very high morbidity and mortality. A large number of these patients require intensive care unit (ICU) like mechanical ventilation, renal replacements therapy, vasopressor support, blood and blood component therapy due to single or multiorgan failure. The clinical picture of these diseases is so overlapping that it is almost impossible to achieve differential diagnosis of these diseases in emergency and ICU settings when the time available for intervention is limited.

SOLUTION BY TRUPCR®

TRUPCR® offers a specialized portfolio of Real-Time PCR assays for the accurate detection of common tropical infections. The Tropical Fever Panel Kit enables comprehensive screening of Dengue, Chikungunya, Zika, *Leptospira, Salmonella, Plasmodium* spp., and more in a single test. For more focused needs, individual kits are available for Dengue virus (including serotyping), Malaria, Zika, *Leptospira*, and *Salmonella*. These assays support rapid, sensitive, and specific detection—helping clinicians quickly differentiate between co-circulating pathogens and ensure appropriate patient management.



1 - https://www.who.int/health-topics/tropical-diseases

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TRUPCR® TROPICAL FEVER ASSAYS

PRODUCT

PRODUCT	Cat. No.	Pack Sizes
TRUPCR® Tropical Fever Panel Kit Qualitative detection & differentiation of Dengue virus, Chikungunya virus, *Salmonella* spp., West Nile virus, *Plasmodium* spp., *Rickettsia* spp., *Leptospira* spp. & ZIKA virus on Real-Time PCR	3B250 3B299	48 96
TRUPCR® Dengue Virus Detection Kit Qualitative detection of Dengue virus on Real-Time PCR	3B266 3B267	48 96
TRUPCR® Dengue Virus Serotyping Kit (RUO) Qualitative detection & differentiation of Dengue virus Serotypes 1 to 4 on Real-Time PCR	3B238 3B237	48 96
TRUPCR® Dengue & Chikungunya Detection Kit Qualitative detection & differentiation of Dengue virus & Chikungunya virus on Real-Time PCR	3B262 3B263	48 96
TRUPCR® Dengue, Chikungunya & Malaria Detection Kit Qualitative detection & differentiation of Dengue virus, Chikungunya virus & *Plasmodium* spp. on Real-Time PCR	3B235 3B236	48 96
TRUPCR® Leptospira Detection Kit Qualitative detection of *Leptospira* spp. on Real-Time PCR	3B249 3B230	48 96
TRUPCR® Malaria Detection Kit Qualitative detection of *Plasmodium* spp. on Real-Time PCR	3B255 3B256	48 96
TRUPCR® Salmonella Enteritidis Detection Kit Qualitative detection of *Salmonella Enteritidis* on Real-Time PCR	3B284 3B298	48 96
TRUPCR® Zika Virus Detection Kit (RUO) Qualitative detection of Zika virus on Real-Time PCR	3B1242 3B1243	48 96

RECOMMENDED EXTRACTION KIT

TRUPCR® Total Nucleic Acid (Viral Nucleic Acid) Extraction Kit (3B213) To be used for Total Nucleic Acid testing from samples like plasma, serum, respiratory specimens, VTM & urine.	3B347 3B348	50 100

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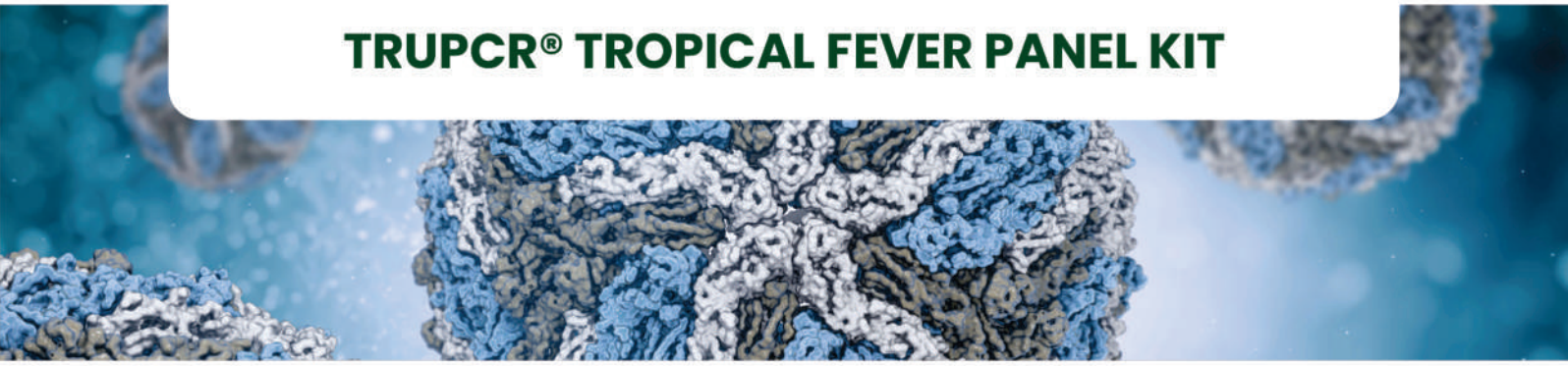
TRUPCR® TROPICAL FEVER PANEL KIT



TROPICAL FEVER

More than a billion people, one-sixth of the world's population, mostly in tropical and sub-tropical developing countries are infected with one or more of the tropical diseases which may be caused by a variety of pathogens including bacteria, viruses, parasites and fungi. These fevers leads to very high morbidity and mortality. A large number of these patients require intensive care unit (ICU) like mechanical ventilation, renal replacements therapy, vasopressor support, blood and blood component therapy due to single or multiorgan failure. The clinical picture of these diseases is so overlapping that it is almost impossible to achieve differential diagnosis of these diseases in emergency and ICU settings when the time available for intervention is limited.

Plasmodium Spp.	HEX
Rickettsia spp.	Texas Red
Chikungunya Virus	FAM
Internal Control	CY5

Zika Virus	HEX
S. typhus	Texas Red
Dengue Virus	FAM
Internal Control	CY5

Leptospira spp.	HEX
West Nile Virus	Texas Red
Salmonella spp.	FAM
Internal Control	CY5

SOLUTION BY TRUPCR®

TRUPCR® Tropical Fever Panel Kit is a multiplex Real-Time PCR kit which is intended for qualitative detection & differentiation of tropical fever causing pathogens from human clinical samples. It includes three tubes assay targeting eight major pathogens including bacteria, viruses & parasites.

TRUPCR® Tropical Fever Panel Kit assay is based on oligonucleotide hydrolysis principle which allows higher specificity and sensitivity.

1 **Extraction**
NA Extraction from clinical Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/burden-of-disease,

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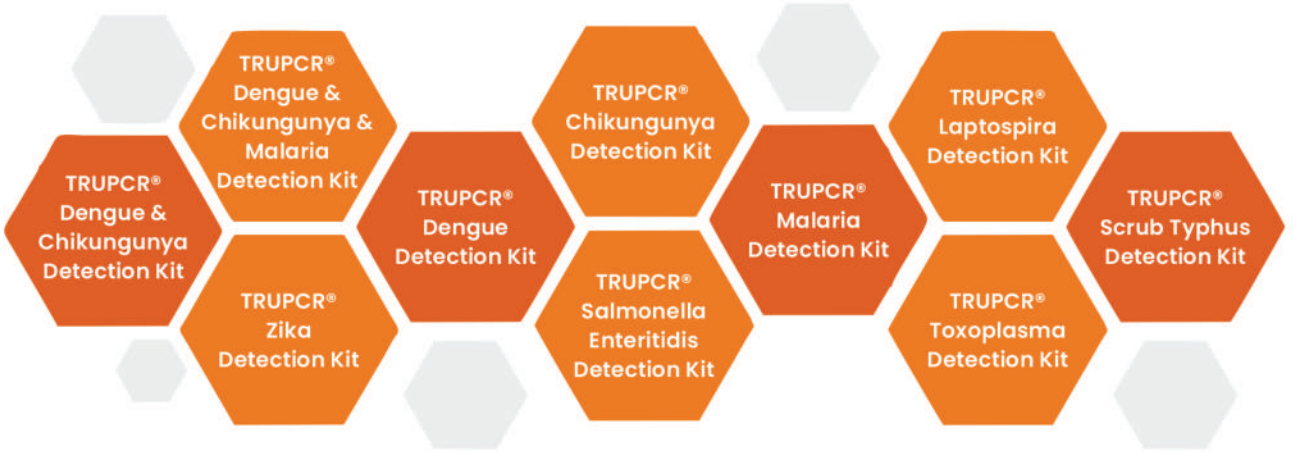
TRUPCR® TROPICAL FEVER PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Serum or plasma or whole blood or urine samples of human origin
CLINICAL VALIDATION	Validated on more than 2000 clinical samples
REACTION VOLUME	25µl in each tube
REACTION TIME	100-120 Minutes PCR run
LIMIT OF DETECTION	10^3 copies/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

OTHER TRUPCR® TROPICAL FEVER TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Tropical Fever Panel Kit	3B250	48
	3B299	96
TRUPCR® Total Nucleic Acid Extraction Kit	3B347	50
	3B348	100

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TRUPCR® UTI ID PANEL KIT

URINARY TRACT INFECTION (UTI)

Urinary Tract Infection (UTI) is an infection in any part of urinary system-kidneys, ureters, bladder and urethra. UTI is the second most common infection after respiratory infections, affecting 150 million people each year worldwide and largely affect women[1]. Effective treatment of UTI depends on the accurate identification of the uropathogen(s). When treated promptly and properly, lower UTI rarely lead to complications. But delayed diagnosis or if left untreated, UTI can have serious consequences including recurrent infections, permanent kidney damage and/or pre-term birth.

SOLUTION BY TRUPCR®

TRUPCR® UTI ID Panel Kit is a multiplexed Real Time PCR kit which is intended for qualitative rapid detection of UTI caused by bacteria and/or fungi directly from human urine of UTI suspected individuals. This assay is based on hydrolysis fluorescence probe which allows higher specificity and sensitivity.

PRODUCT HIGHLIGHTS

- **Can detect 14 uropathogens including bacteria & fungi**
- **Detect co-infections with multiple pathogens**
- **Run time less than 1 hour**

01	*Enterococcus faecalis*	FAM
	Klebsiella oxytoca	Texas Red
02	*Escherichia coli*	FAM
	Acinetobacter baumannii	Texas Red
	Streptococcus agalactiae	Cy5
03	*Klebsiella pneumoniae*	FAM
	Staphylococcus aureus	Texas Red
	Enterococcus faecium	Cy5
04	*Proteus mirabilis*	FAM
	Streptococcus pneumoniae	Texas Red
	Candida albicans	Cy5
05	*Morganella morganii*	FAM
	Staphylococcus saprophyticus	Texas Red
	Pseudomonas aeruginosa	Cy5

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

1 Extraction
NA Extraction from Urine Specimen

2 Assay Setup
Automated Assay Setup

3 PCR
Platform Agnostic

4 Post PCR
Complementary Software Analysis Tools

1 - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457377/

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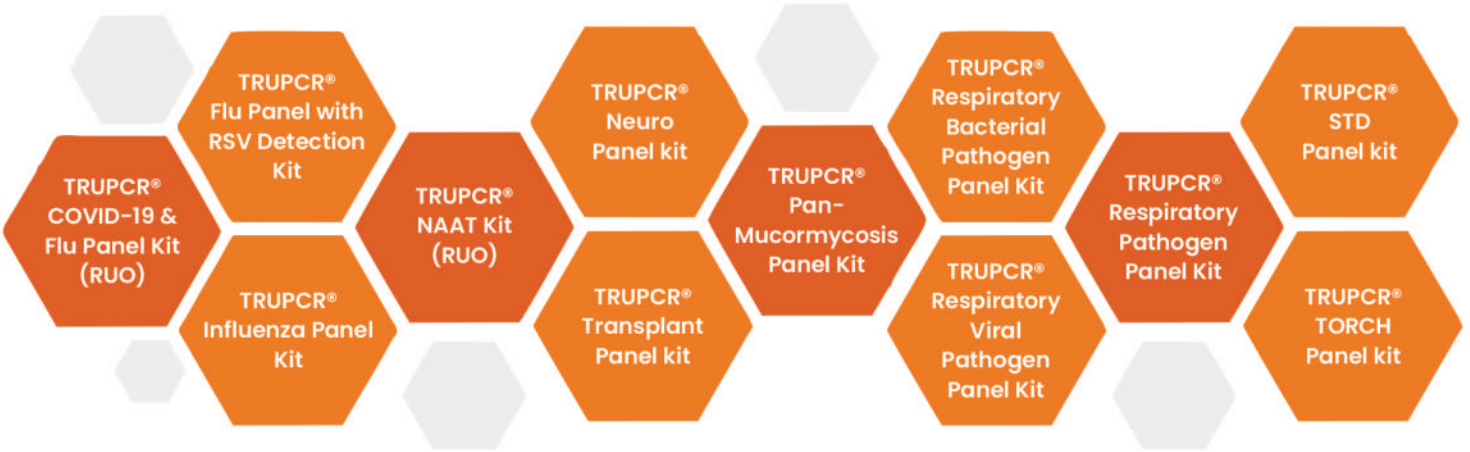
TRUPCR® UTI ID PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Urine specimen
REACTION VOLUME	20 µl in each tube
LIMIT OF DETECTION	1 x 10^3 CFU/ml
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
CLINICAL VALIDATION	Extensively validated on more than 500 samples
COMPATIBLE INSTRUMENTS	Bio-Rad CFX96, CFX384, QuantStudio® 5, ABI 7500, Qiagen Rotor-Gene Q, mic PCR

OTHER TRUPCR® INFECTIOUS DISEASES PANELS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® UTI ID Panel Kit	3B319	48
	3B320	96
TRUPCR® Bacterial/Fungal DNA Extraction Kit	3B345	50
	3B346	100

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TRUPCR® AST PANEL KIT

ANTIMICROBIAL RESISTANCE (AMR)

WHO has declared that AMR is one of the top 10 global public health threats humanity is facing. Antimicrobial resistance (AMR) is a global health and development threat. It requires urgent multisectoral action in order to achieve the Sustainable Development Goals (SDGs)[1]. Effective treatment of infections depends on the accurate identification of the pathogen(s) and the correct choice of antibiotic(s). Hence accurate antimicrobial resistance (AMR) profiling of a pathogen is very important.

SOLUTION BY TRUPCR®

TRUPCR® AST Panel Kit is a multiplex real-time PCR kit which is intended for detection of antimicrobial resistant genes of pathogen(s). It includes five tubes targeting fourteen antimicrobial resistance genes representing different antibiotic classes for antimicrobial resistance testing to accurately diagnose and report a definitive treatment recommendation for each patient.

This assay is based on oligonucleotide hydrolysis probe which allows higher specificity and sensitivity.

01	Trimethoprim/ sulfamethoxazole (SXT)	*sul2* *dfrA1* *dfrA5*	FAM Texas Red Cy5
02	Extended Spectrum Beta Lactams (ESBLs)	$bla_{CTX-M\ gr1}$ bla_{TEM} bla_{SHV}	FAM Texas Red Cy5
03	Carbapenems Set 1	bla_{KPC} bla_{NDM} bla_{VIM}	FAM Texas Red Cy5
04	Carbapenems Set 2	$bla_{OXA-48\ like}$ bla_{IMP}	FAM Texas Red
05	Methicillin & Vancomycin	*mecA* *vanA* *vanB*	FAM Texas Red Cy5

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

1 **Extraction**
NA Extraction from wide variety of clinical Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

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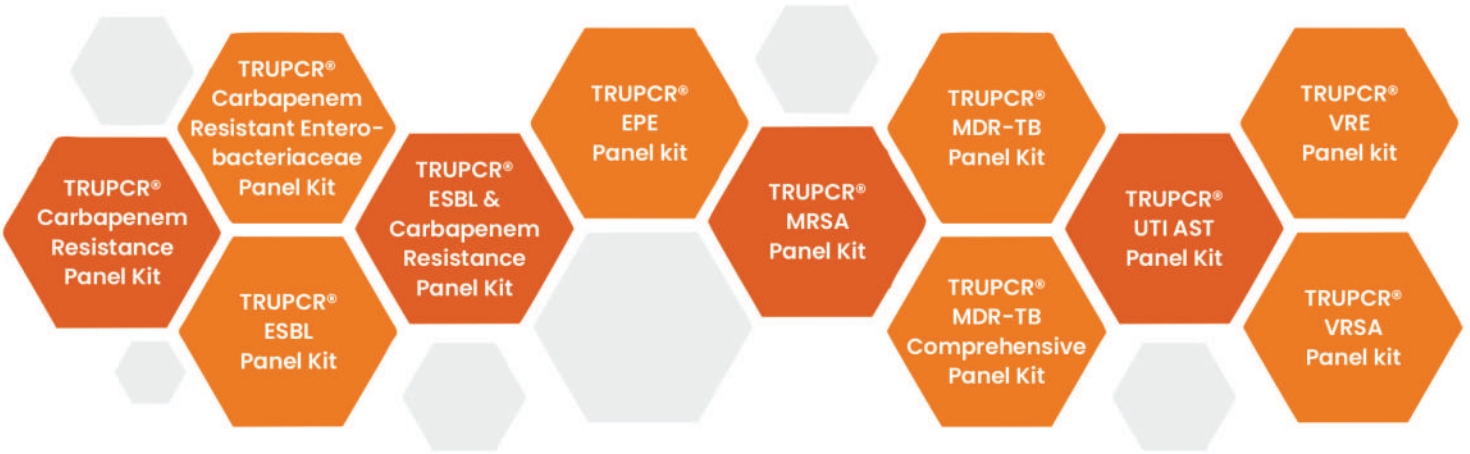
TRUPCR® AST PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Positive blood culture broth, Rectal swab, Bronchoalveolar lavage (BAL), Sputum, Urine, Culture isolates
RUN TIME	Less than 1 hr
REACTION VOLUME	20 µl in each tube
LIMIT OF DETECTION	Upto 10 copies/reaction
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE –** ESBL Producing Enterobacteriaceae, **MRSA –** Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB –** Multi Drug Resistant Tuberculosis, **VRE –** Vancomycin Resistant Enterococci, **VRSA –** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® AST Panel Kit	3B361	48
	3B362	96
TRUPCR® Bacterial DNA Extraction Kit	3B371	50
	3B372	100

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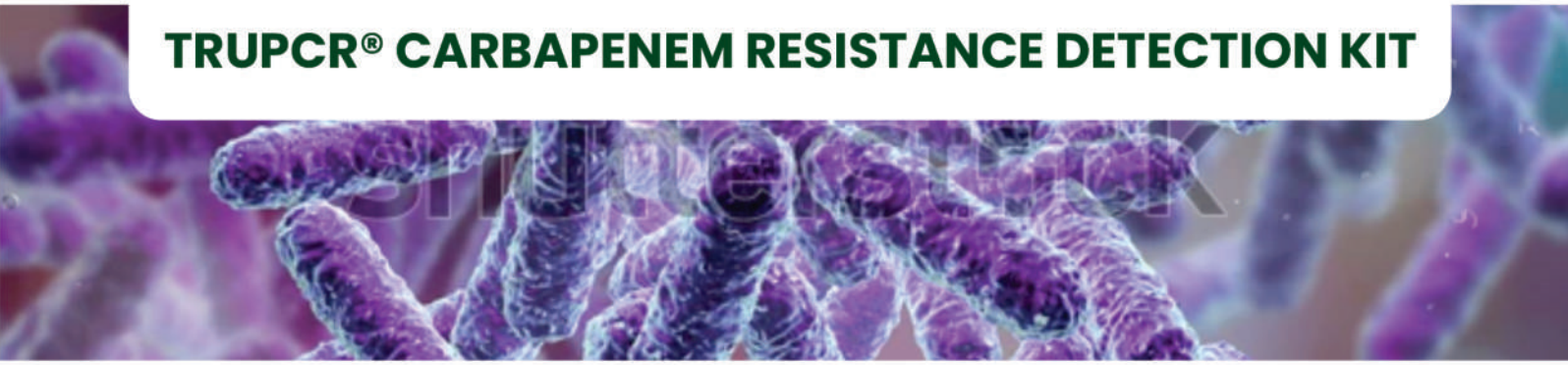
TRUPCR® CARBAPENEM RESISTANCE DETECTION KIT



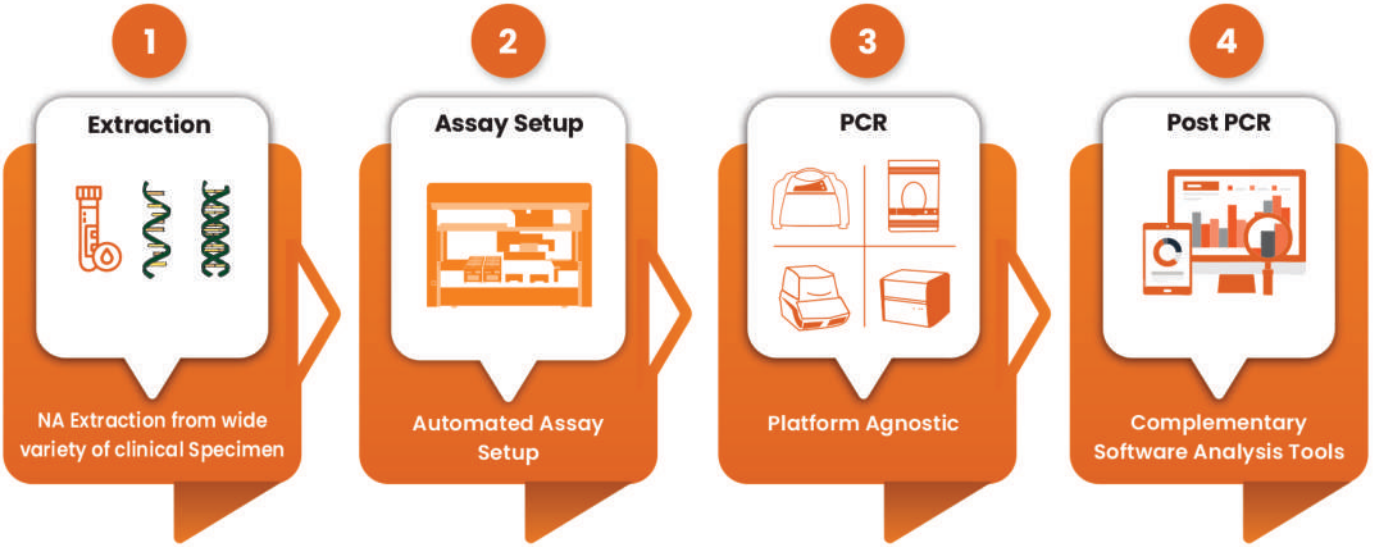
CARBAPENEM RESISTANCE

Carbapenem resistance is a major and an on-going public health problem globally. It occurs mainly among Gram-negative bacteria. Infections by such pathogens pose a serious threat to hospitalized patients due to resistant of all beta-lactam antibiotics as well as co-resistant to most other antibiotics, leaving very few treatment options which are associated with clinical and economic consequences.

Culture is the reference method for detection, requires at least a turn-around time of between 2-3 days which will be critical in emergency and ICU patients when the time available for intervention is limited. New CLSI & WHO recommendations aim to speed up detection and improve treatment outcomes for Carbapenem resistance through use of a molecular diagnostic test.

SOLUTION BY TRUPCR®

TRUPCR® Carbapenem Resistance Detection Kit is an in vitro nucleic acid amplification assay for the qualitative detection and differentiation of the bla_{KPC} (KPC-*Klebsiella pneumoniae carbapenemase*), bla_{NDM} (NDM-New Delhi Metallo-beta-lactamase), bla_{VIM} (VIM-Verona integron-mediated metallo-beta-lactamase), $bla_{OXA-48\ like}$ (OXA-48-Oxacillinase-48) and bla_{IMP} (IMP-Imipenemase metallo-beta-lactamase) on Real-Time PCR.



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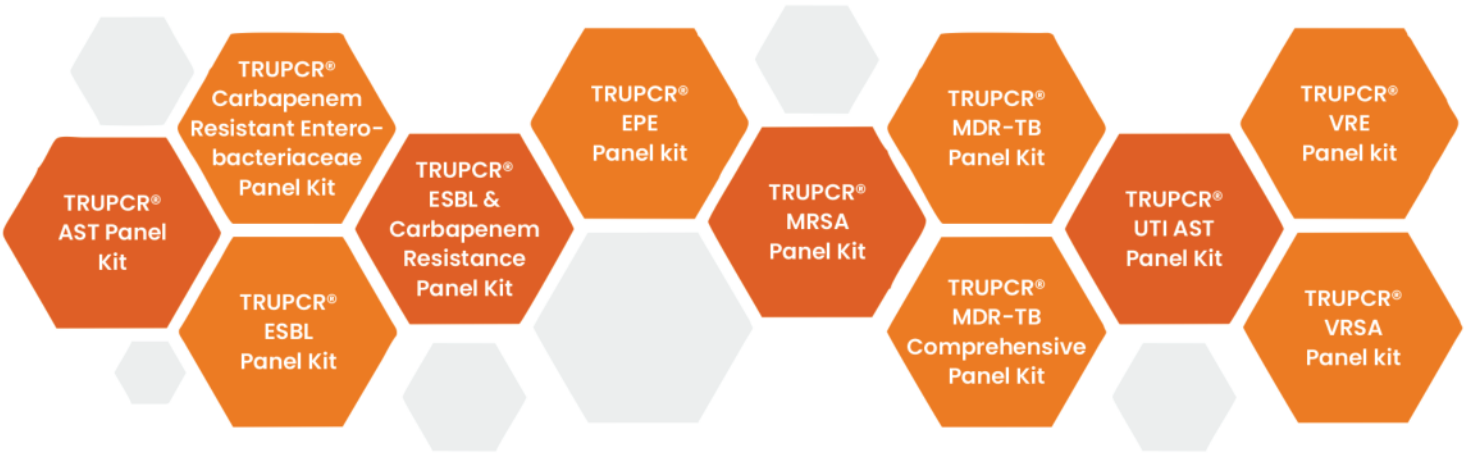
TRUPCR® CARBAPENEM RESISTANCE DETECTION KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Pure bacterial Colonies, Rectal swabs, Sputum, BAL
RUN TIME	100-120 Minutes PCR
REACTION VOLUME	25 µl in each tube
CLINICAL VALIDATION	Validated on more than 500 clinical samples
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE –** ESBL Producing Enterobacteriaceae, **MRSA –** Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB –** Multi Drug Resistant Tuberculosis, **VRE –** Vancomycin Resistant Enterococci, **VRSA –** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Carbapenem Resistance Detection Kit	3B289	48
	3B290	96
TRUPCR® Total Nucleic Acid Extraction Kit	3B347	50
	3B348	100
TRUPCR® Bacterial/Fungal DNA Extraction Kit	3B345	50
	3B346	100

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TRUPCR® ESKAPE ID & AST PANEL KIT

ESKAPE

ESKAPE is an acronym comprising of six highly virulent and antibiotic resistant bacterial pathogens including: *Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa* and *Enterobacter* spp.

These bacteria are responsible for majority of nosocomial infections and can 'escape' commonly used antibiotics due to their increasing multi-drug resistance. As a result, throughout the world, the ESKAPE pathogens are of more prominent concern in healthcare settings due to the high susceptibility of patients (elderly, young, and immune compromised) to infections. WHO has categorised all these bacteria as the 'priority pathogens'. A fast identification (ID) and antimicrobial susceptibility (AST) profiling of the ESKAPE pathogens is essential to prevent its nosocomial transmission.

PRODUCT HIGHLIGHTS

- **Simultaneous identification of 6 ESKAPE pathogens and AST profiling targeting 11 genes with 4 different classes of antibiotics**
- **Room Temperature reaction set up**
- **Run time less than 1 hour**

01	*Klebsiella pneumoniae*		FAM
	Staphylococcus aureus		Texas Red
	Enterococcus faecium		Cy5
	Internal Control		HEX
02	*Enterobacter spp.*		FAM
	Acinetobacter baumannii		Texas Red
	Pseudomonas aeruginosa		Cy5
	Internal Control		HEX
03	Extended Spectrum Beta Lactams (ESBLs)	$bla_{CTX-M\ grl}$	FAM
		bla_{TEM}	Texas Red
		bla_{SHV}	Cy5
		IC	HEX
04	Carbapenems Set 1	bla_{KPC}	FAM
		bla_{NDM}	Texas Red
		bla_{VIM}	Cy5
		IC	HEX
05	Carbapenems Set 2	bla_{OXA-48}	FAM
		bla_{IMP}	Cy5
		IC	HEX
06	Methicillin	*mecA*	FAM
	Vancomycin	*vanA*	Texas Red
		vanB	Cy5
		IC	HEX

1 Extraction
NA Extraction from wide variety of clinical Specimen

2 Assay Setup
Automated Assay Setup

3 PCR
Platform Agnostic

4 Post PCR
Complementary Software Analysis Tools

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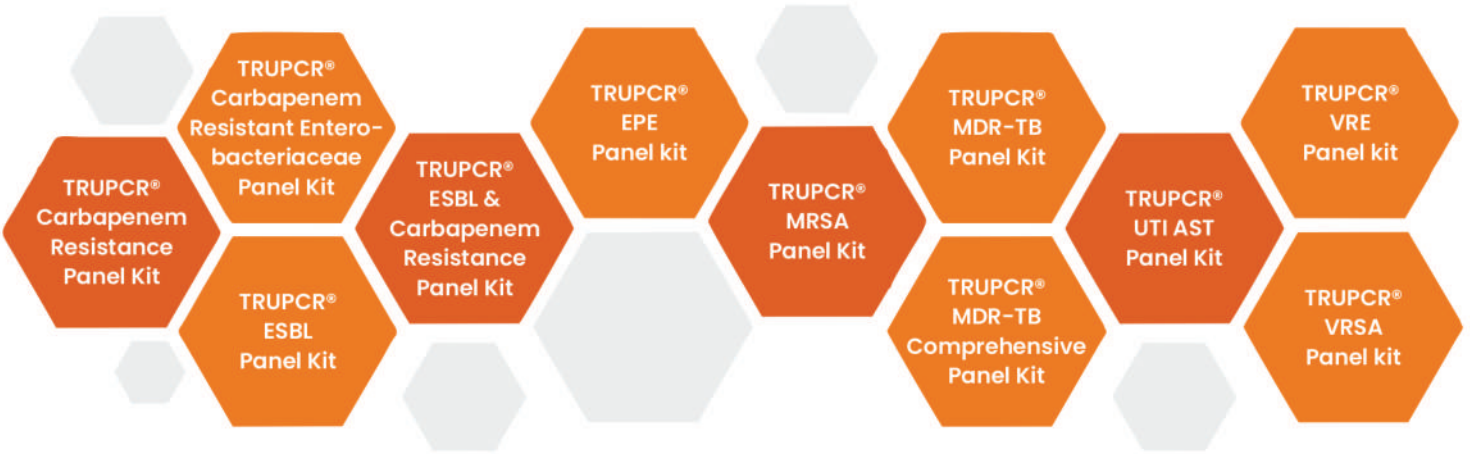
TRUPCR® ESKAPE ID & AST PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Clinical samples / cultured isolates
REACTION VOLUME	20 µl in each tube
LIMIT OF DETECTION	Upto 10 copies/reaction
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE –** ESBL Producing Enterobacteriaceae, **MRSA –** Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB –** Multi Drug Resistant Tuberculosis, **VRE –** Vancomycin Resistant Enterococci, **VRSA –** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® ESKAPE ID & AST Panel Kit	3B395	48
	3B396	96
TRUPCR® Bacterial DNA Extraction Kit	3B371	50
	3B372	100

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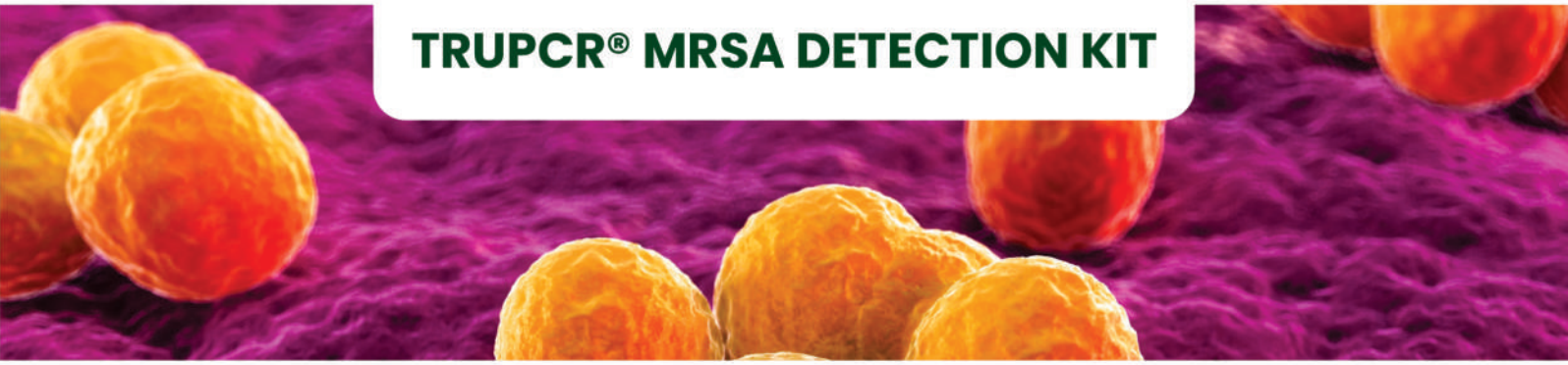
TRUPCR® MRSA DETECTION KIT



METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

MRSA stands for methicillin-resistant *Staphylococcus aureus*, a type of bacteria that is resistant to several antibiotics including beta-lactam antibiotics. A review of 15 studies shows between 13 and 74% of worldwide *S. aureus* infections are MRSA. MRSA most often causes skin infections. In some cases, it causes pneumonia (lung infection) and other infections. If left untreated, MRSA infections can become severe and cause sepsis. MRSA is usually spread in the community by contact with infected people or things that are carrying the bacteria. Intensive care units are the harbinger of multidrug-resistant organisms including MRSA and are responsible for its spread within the hospital. Timely diagnosis & early treatment can help prevent the infection for further transmission and from getting worse.

SOLUTION BY TRUPCR®

TRUPCR® MRSA Detection Kit is an in vitro nucleic acid amplification test for the qualitative detection of *Staphylococcus aureus* and its Methicillin-Resistant/Susceptible status from clinical samples using Real time PCR.

Staphylococcus aureus	FAM
MecA gene	HEX
mecC gene	Cy5
Internal Control	Texas Red

1. **Extraction**
   NA Extraction from wide variety of clinical Specimen
2. **Assay Setup**
   Automated Assay Setup
3. **PCR**
   Platform Agnostic
4. **Post PCR**
   Complementary Software Analysis Tools

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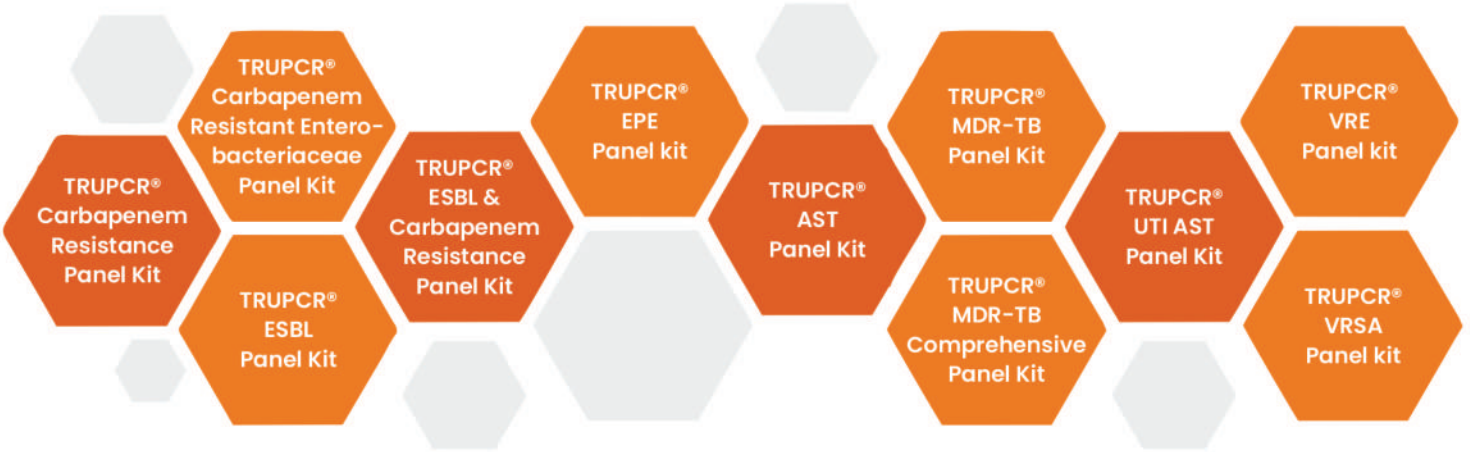
TRUPCR® MRSA DETECTION KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Bacterial Culture, BAL/Nasal Swab/Sputum/Tracheal aspirate
RUN TIME	100 -120 Minutes PCR
REACTION VOLUME	25 µl
LIMIT OF DETECTION	10^2 CFU/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL - Extended-Spectrum Beta-Lactams, **EPE -** ESBL Producing Enterobacteriaceae, **MRSA -** Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB -** Multi Drug Resistant Tuberculosis, **VRE -** Vancomycin Resistant Enterococci, **VRSA -** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® MRSA Detection Kit	3B1283	48
	3B1284	96
TRUPCR® Total Nucleic Acid Extraction Kit	3B347	50
	3B348	100

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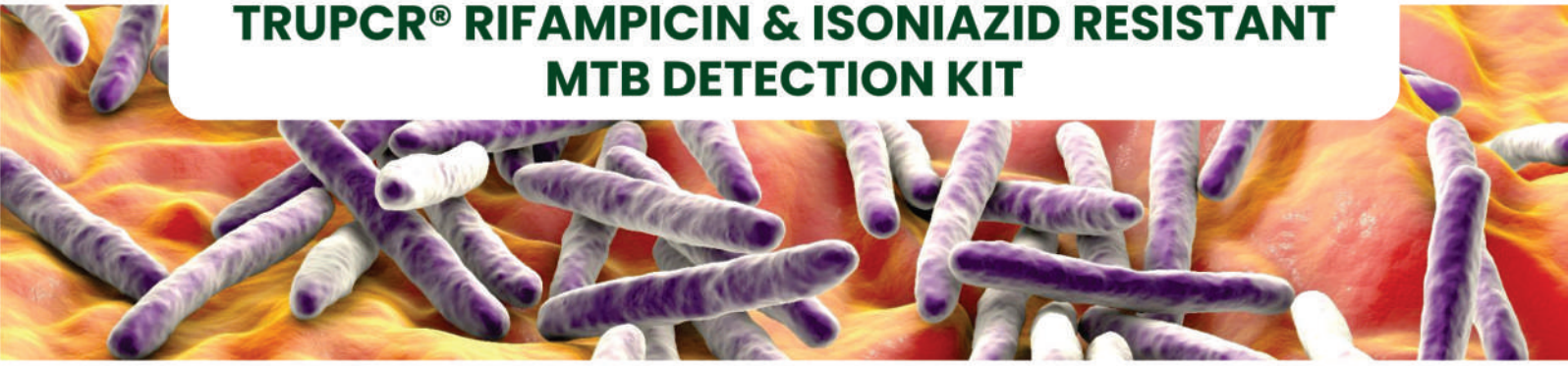
TRUPCR® RIFAMPICIN & ISONIAZID RESISTANT MTB DETECTION KIT



MULTI DRUG RESISTANT - TUBERCULOSIS (MDR-TB)

Worldwide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent[1]. Antibiotic resistant *Mycobacterium tuberculosis* strains are threatening progress in containing the global tuberculosis epidemic. MDR-TB requires treatment courses that are longer, less effective and far more expensive than those for non-resistant TB.

Culture which is the reference method for detection, requires at least a turn-around time of between 2 and 10 weeks & then again testing for these anti-TB drugs will take another few weeks. New WHO recommendations aim to speed up detection and improve treatment outcomes for MDR-TB through use of a molecular diagnostic test.

01	Mycobacterium TB Complex	HEX
	Internal Control	Texas Red
02	Rifampicin (*rpoB*)	HEX
	Rifampicin (*rpoB*)	Texas Red
	Rifampicin (*rpoB*)	FAM
03	Rifampicin (*rpoB*)	HEX
	Rifampicin (*rpoB*)	FAM
04	Isoniazid (*katG*)	HEX
	Isoniazid (*InhA*)	FAM

SOLUTION BY TRUPCR®

TRUPCR® Rif/INH MTB Drug Resistant Detection Kit is designed for accurate identification of Mycobacterium tuberculosis complex (MTC) along with Rifampicin and Isoniazid resistance/susceptible status from clinical samples using Real time nested PCR.

1 **Extraction**
MTB DNA from wide variety of clinical Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

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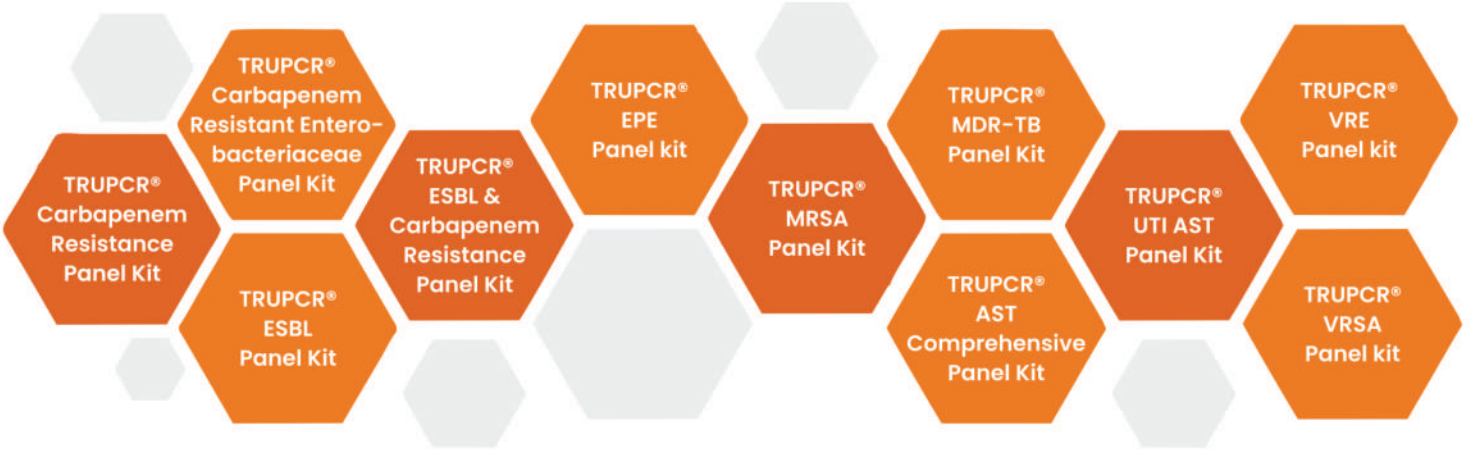
TRUPCR® RIFAMPICIN & ISONIAZID RESISTANT MTB DETECTION KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Sputum, BAL, Pus, CSF, Aseptic fluid, Aseptic tissue, Urine and Other fluid samples of human origin
CLINICAL VALIDATION	Validated on more than 500 clinical samples
REACTION VOLUME	30 µl in each tube
LIMIT OF DETECTION	MTBC - 10 CFU/ml*, MDR - 120 CFU/ml*
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

*In Sputum Sample

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE –** ESBL Producing Enterobacteriaceae, **MRSA –** Methicillin-Resistant *Staphylococcus aureus*, **AST –** Antimicrobial Susceptibility Testing, **VRE –** Vancomycin Resistant Enterococci, **VRSA –** Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Rifampicin & Isoniazid Resistant MTB Detection Kit	3B1280	48
	3B1275	96
TRUPCR® MTB/NTM DNA Extraction Kit	3B268E	50

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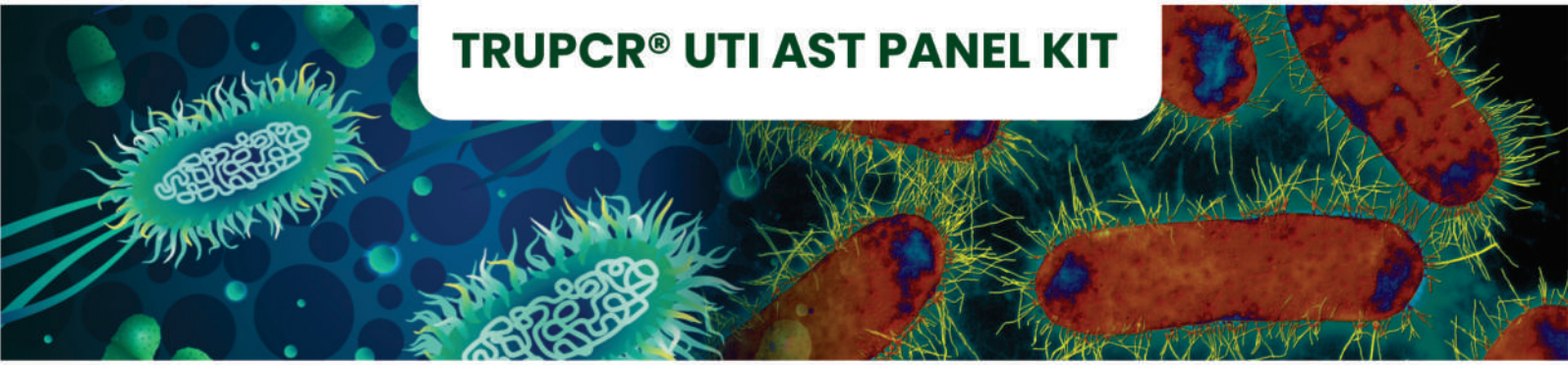

TRUPCR® UTI AST PANEL KIT

URINARY TRACT INFECTION (UTI)

Urinary Tract Infection (UTI) is an infection in any part of urinary system-kidneys, ureters, bladder and urethra. UTI is the second most common infection after respiratory infections, affecting 150 million people each year worldwide and largely affect women[1]. When treated promptly and properly, lower UTI rarely lead to complications. But left untreated, UTI can have serious consequences including recurrent infections, permanent kidney damage and/or pre-term birth.

SOLUTION BY TRUPCR®

TRUPCR® UTI AMR Panel Kit is a multiplexed Real Time PCR kit which is intended for detection of antimicrobial sensitivity of uropathogen(s) from human urine of UTI suspected individuals. This assay is based on TaqMan hydrolysis probe which allows higher specificity and sensitivity.

PRODUCT HIGHLIGHTS

- **AMR profiling targeting 14 genes with 5 different classes of antibiotics**
- **Run time less than 1 hour**

01	Trimethoprim/ sulfamethoxazole (SXT)	*sul2*	FAM
		dfrA1	Texas Red
		dfrA5	Cy5
02	Extended Spectrum Beta Lactams (ESBLs)	$bla_{CTX-M\ gr\ 1}$	FAM
		bla_{TEM}	Texas Red
		bla_{SHV}	Cy5
03	Carbapenems Set 1	bla_{KPC}	FAM
		bla_{NDM}	Texas Red
		bla_{VIM}	Cy5
04	Carbapenems Set 2	$bla_{OXA-48\ like}$	FAM
		bla_{IMP}	Texas Red
05	Methicillin	*mecA*	FAM
	Vancomycin	*vanA*	Texas Red
		vanB	Cy5

**Endogenous internal control (labeled with HEX) is included in each tube to avoid false negative results*

1 **Extraction**
NA Extraction from Urine Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457377/

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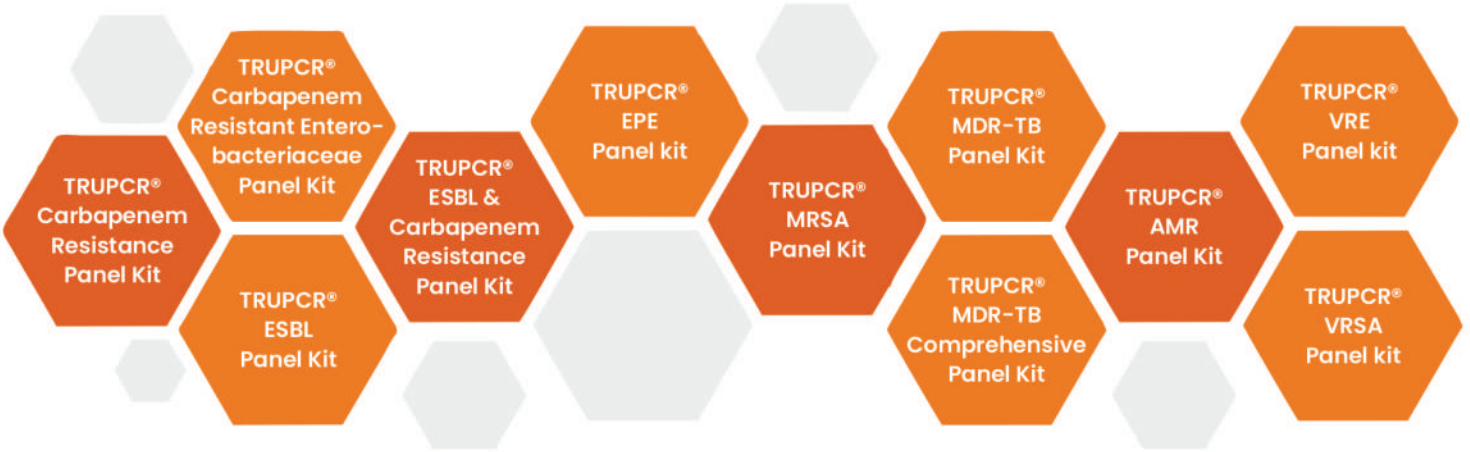
TRUPCR® UTI AST PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Urine specimen
REACTION VOLUME	20 µl in each tube
LIMIT OF DETECTION	10^3 copies/reaction
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
CLINICAL VALIDATION	Extensively validated on more than 500 samples
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



ESBL – Extended-Spectrum Beta-Lactams, **EPE** – ESBL Producing Enterobacteriaceae, **MRSA** – Methicillin-Resistant *Staphylococcus aureus*, **MDR-TB** – Multi Drug Resistant Tuberculosis, **VRE** – Vancomycin Resistant Enterococci, **VRSA** – Vancomycin Resistant *Staphylococcus aureus*

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® UTI AMR Panel Kit	3B343	48
	3B344	96
TRUPCR® Bacterial/Fungal DNA Extraction Kit	3B345	50
	3B346	100

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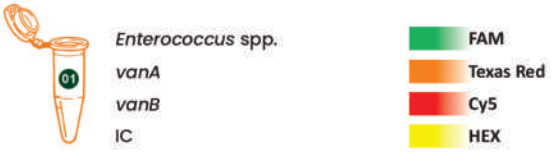
TRUPCR® VRE DETECTION KIT

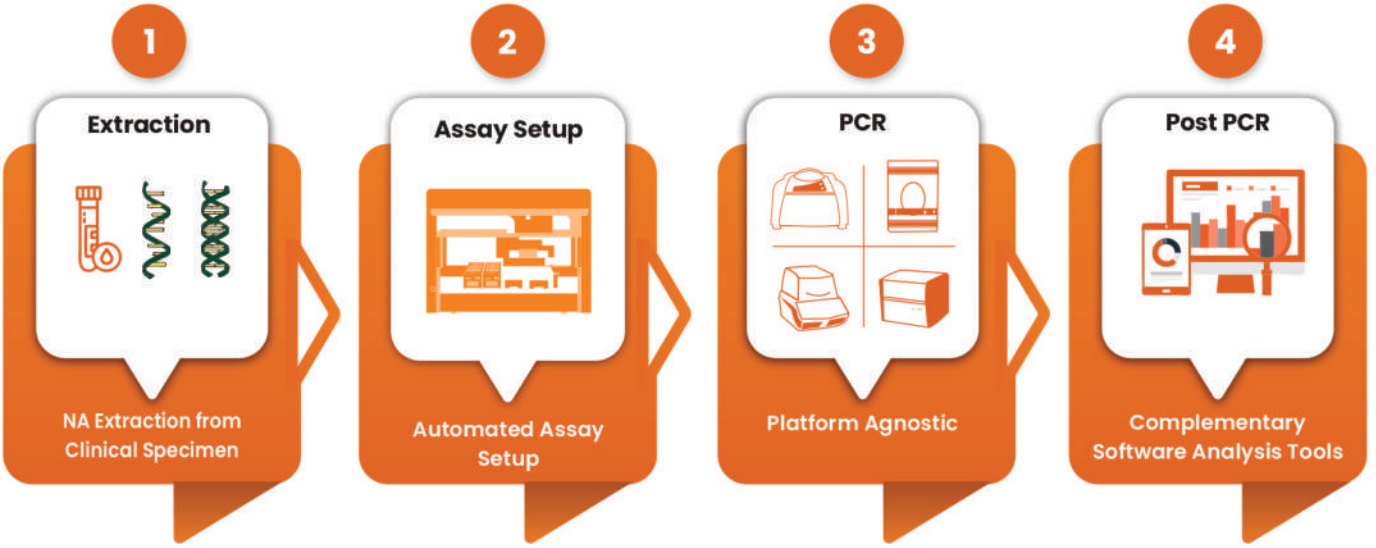
Vancomycin Resistant Enterococci (VRE)

Enterococcus spps. are normally present in the human intestines, but recently they are recognized as major pathogens causing urinary tract infections and sepsis by nosocomial infection. Extensive antibiotic treatments has caused Enterococcal strains such as *E. faecalis* or *E. faecium* to become resistant to vancomycin, which is commonly used in the treatment of Enterococci infection. Acquired resistance to vancomyin is mostly due to two types of gene clusters, *vanA* and *vanB*. The emergence of Vancomycin Resistant Enterococci (VRE) poses a major public health problem since it was first reported. VRE are among the most common resistant pathogens frequently causing healthcare associated infections and a growing concern for health care professionals. A fast and effective identification of VRE is essential to prevent its nosocomial transmission.

SOLUTION BY TRUPCR®



TRUPCR® VRE Detection Kit is a multiplexed real time PCR kit which is intended for sensitive and specific detection of *Enterococcus* spp. (*E. faecalis* and *E. faecium*), *vanA* and *vanB* genes in clinical samples / cultured isolates. This is a single tube reaction targeting *Enterococcus* spp. and vancomycin resistance genes *vanA* and *vanB* along with an endogenous internal control. This assay is based on TaqMan hydrolysis probe which allows higher specificity and sensitivity.



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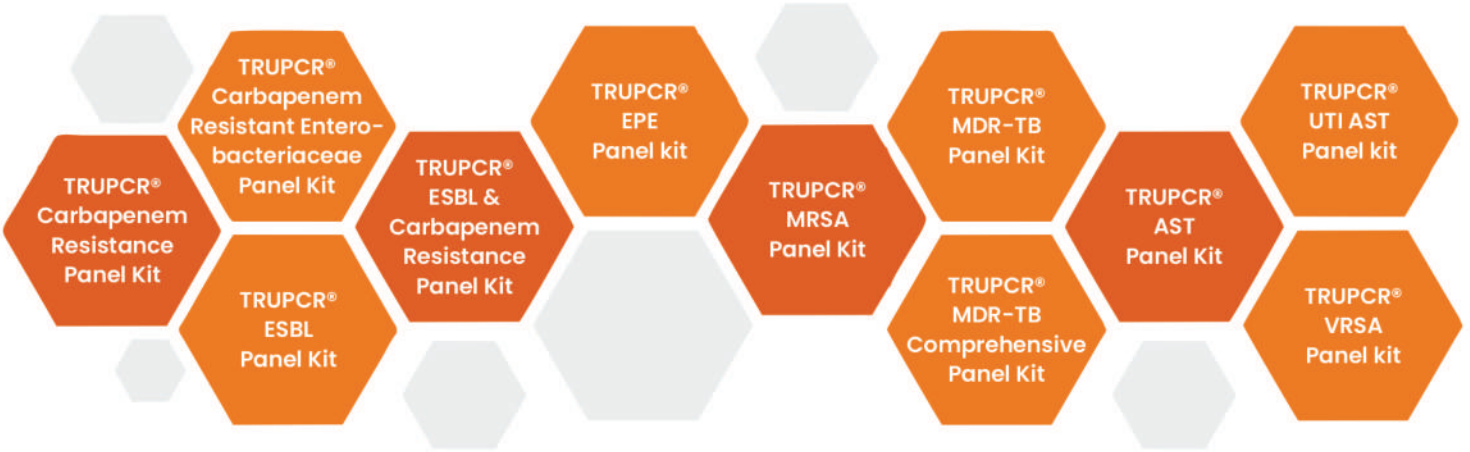
TRUPCR® VRE DETECTION KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Rectal swab / Urine / cultured isolates
RUN TIME	Less than 1 hr
REACTION VOLUME	20 µl in each tube
RELIABLE WORKFLOW	UNG is included in the master mix to avoid carry over contamination
LIMIT OF DETECTION	10 copies/reaction
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96 and mic PCR

OTHER TRUPCR® AMR TESTING KITS



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ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® VRE Detection Kit	3B373	48
	3B374	96
TRUPCR® Bacterial DNA Extraction Kit	3B371	50
	3B372	100
TRUPCR® Bacterial/Fungal DNA Extraction Kit	3B345	50
	3B346	100

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TRUPCR® HBV VIRAL LOAD KIT

HEPATITIS B VIRUS

Hepatitis B is a vaccine-preventable liver infection caused by the hepatitis B virus (HBV). This can happen through sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth. Not all people newly infected with HBV have symptoms, but for those that do, symptoms can include fatigue, poor appetite, stomach pain, nausea, and jaundice. For many people, hepatitis B is a short-term illness. For others, it can become a long-term, chronic infection that can lead to serious, even life-threatening health issues like cirrhosis or liver cancer. Risk for chronic infection is related to age at infection: about 90% of infants with hepatitis B go on to develop chronic infection, whereas only 2%–6% of people who get hepatitis B as adults become chronically infected. The best way to prevent hepatitis B is to get vaccinated.

SOLUTION BY TRUPCR®

TRUPCR® HBV Viral Load Kit is an in vitro nucleic acid amplification assay for the quantitative detection of HBV viral DNA from HBV infected individual specimens using Real Time PCR System. HBV viral load measurement is essential for the diagnosis, decision to treat and subsequent monitoring of patients. TRUPCR® HBV Viral Load Kit primers and probes target the highly conserved pre-core and core regions of the HBV genome.

PRODUCT HIGHLIGHTS

- **Takes advantage of the "hot start" technology to minimizing non-specific reactions and assuring maximum sensitivity & specificity**
- **The assay enables accurate quantification of genotypes A, B, C, D, E, F, G, and H**
- **No cross- reactivity with other pathogenic virus, bacteria or fungi.**

1 **Extraction**

NA Extraction from clinical Specimen

2 **Assay Setup**

Automated Assay Setup

3 **PCR**

Platform Agnostic

4 **Post PCR**

Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases

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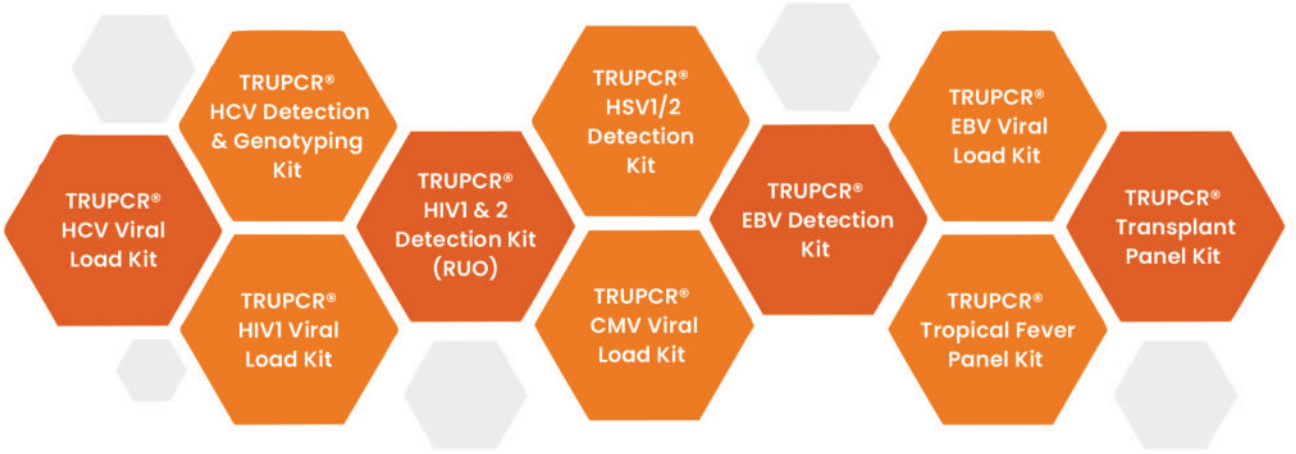
TRUPCR® HBV VIRAL LOAD KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Serum, plasma or blood (EDTA)
CLINICAL VALIDATION	More than 10,000 samples
REACTION VOLUME	30 µL
REACTION TIME	1 hr 50 min
LIMIT OF DETECTION	2.5 IU/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

OTHER TRUPCR® INFECTIOUS DISEASES PANELS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® HBV Viral Load Kit	3B341	24
	3B293	48
	3B294	96
TRUPCR® Total Viral Nucleic Acid Extraction Kit	3B357	50
	3B358	100

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TRUPCR® HCV VIRAL LOAD KIT

HEPATITIS C VIRUS

HCV FAM
Endogenous IC HEX

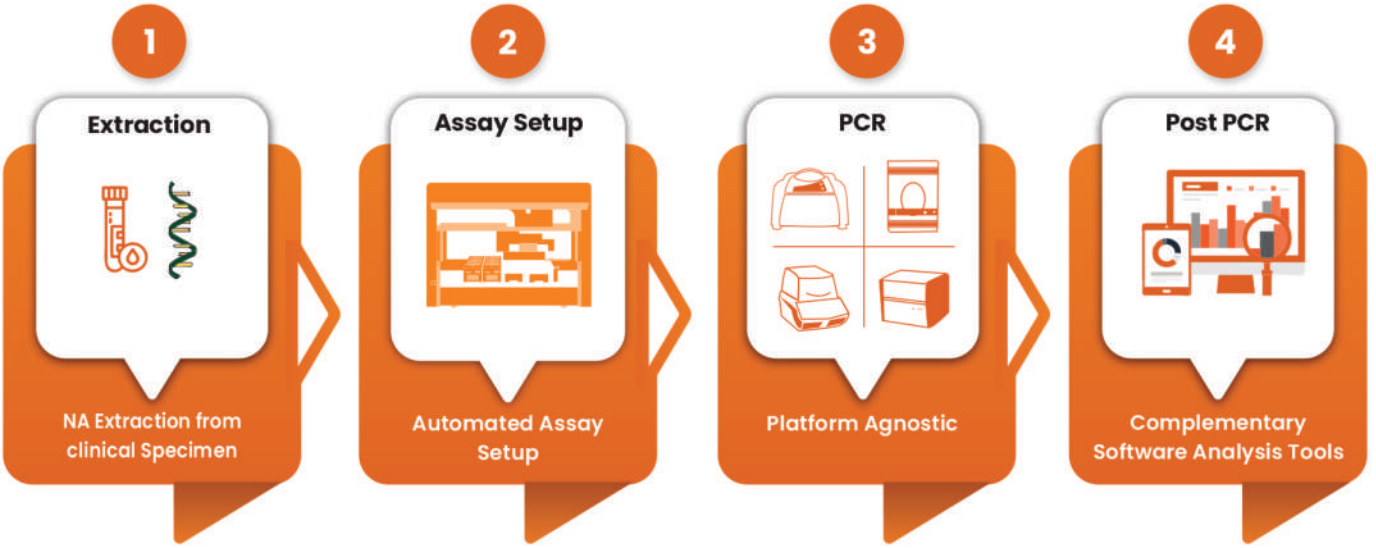
Hepatitis C virus (HCV) causes liver infection. It is primarily transmitted through blood-to-blood contact, such as sharing needles, syringes, or other drug-injection equipment. In some cases, HCV can also be transmitted through sexual contact or from mother to child during childbirth, though this is less common. Many individuals infected with HCV do not experience symptoms initially, but those who do may notice fatigue, abdominal discomfort, jaundice, and other flu-like symptoms. If untreated, HCV can progress to a chronic infection, potentially leading to severe liver complications like cirrhosis and liver cancer over time. Unlike Hepatitis B, there is no vaccine available to prevent Hepatitis C, but advancements in antiviral therapies have significantly improved treatment outcomes, often curing the infection and preventing long-term liver damage when diagnosed early.

SOLUTION BY TRUPCR®

TRUPCR® HCV Viral Load Kit is an in vitro nucleic acid amplification assay for the detection and quantification of Hepatitis C Virus (HCV) RNA (all genotypes and sub-genotypes) in humanserum or plasma (EDTA) from HCV-infected individual specimens using Real Time PCR System. HCV viral load measurement is essential for the diagnosis, decision to treat and subsequent monitoring of patients. TRUPCR® HCV Viral Load Kit primers and probes target the highly conserved regions of the HCV genome.

PRODUCT HIGHLIGHTS

- **Takes advantage of the "hot start" technology to minimizing non-specific reactions and assuring maximum sensitivity & specificity**
- **The assay enables accurate quantification of genotypes 1, 2, 3, 4, 5 & 6**
- **No cross- reactivity with other pathogenic virus, bacteria or fungi.**
- **"One Step RT-PCR Assay - Extracted RNA is used as starting material"**



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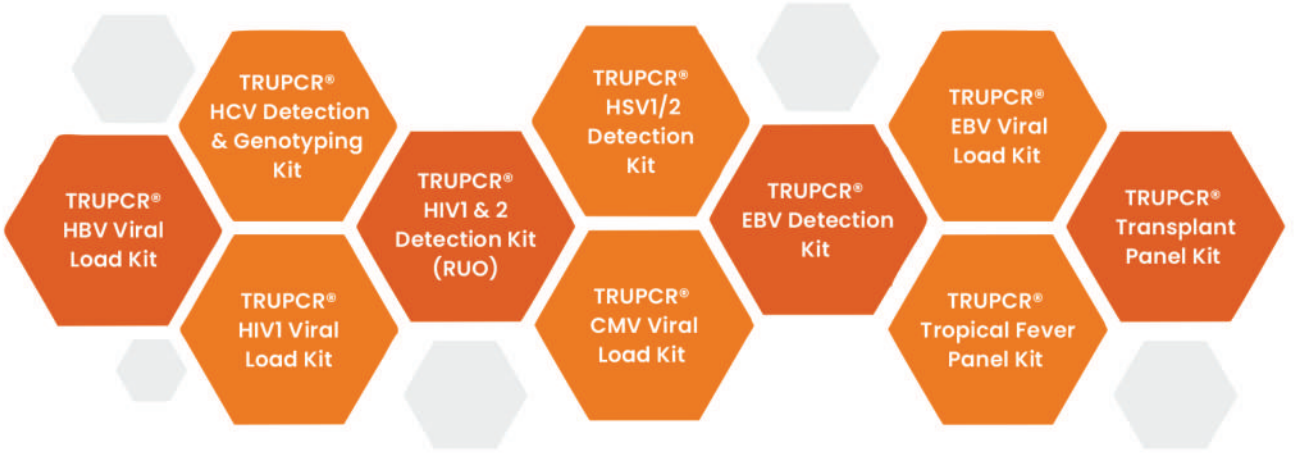
TRUPCR® HCV VIRAL LOAD KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Serum, plasma or blood (EDTA)
CLINICAL VALIDATION	More than 10,000 samples
REACTION VOLUME	25 µL
REACTION TIME	1 hr 50 min
LIMIT OF DETECTION	20 IU/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

OTHER TRUPCR® INFECTIOUS DISEASES PANELS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® HCV Viral Load Kit	3B342	24
	3B296	48
	3B297	96
TRUPCR® Total Viral Nucleic Acid Extraction Kit	3B357	50
	3B358	100

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TRUPCR® HIV VIRAL LOAD KIT

HUMAN IMMUNODEFICIENCY VIRUS

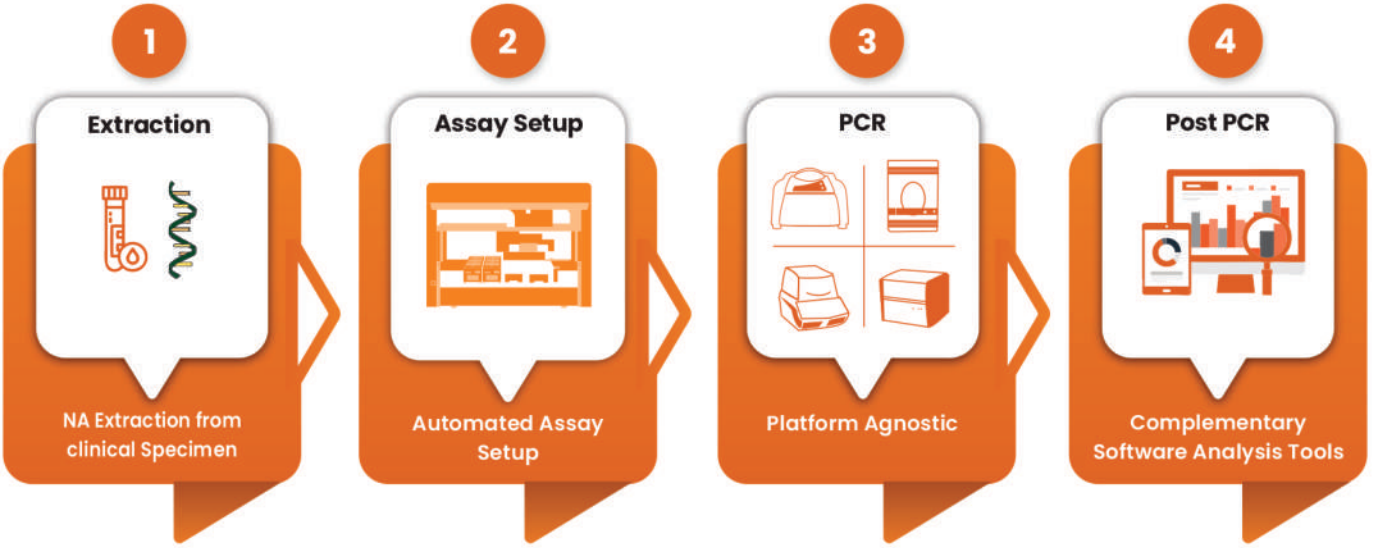
Human immunodeficiency virus (HIV) is a virus that attacks the body's immune system. Acquired immunodeficiency syndrome (AIDS) occurs at the most advanced stage of infection. HIV targets the body's white blood cells, weakening the immune system. This makes it easier to get sick with diseases like tuberculosis, infections and some cancers. HIV is spread from the body fluids of an infected person, including blood, breast milk, semen and vaginal fluids. It is not spread by kisses, hugs or sharing food. It can also spread from a mother to her baby. HIV can be prevented and treated with antiretroviral therapy (ART). Untreated HIV can progress to AIDS, often after many years. WHO now defines Advanced HIV Disease (AHD) as CD4 cell count less than 200 cells/mm3 or WHO stage 3 or 4 event in adults and adolescents. All children younger than 5 years of age living with HIV are considered to have advanced HIV disease, regardless of clinical or immunological status.

SOLUTION BY TRUPCR®

TRUPCR® HIV Viral Load Kit is an in vitro nucleic acid amplification assay for the qualitative and quantitative detection of Human Immunodeficiency type-1 (HIV-1) Viral RNA in human serum or plasma (EDTA) specimens using Real Time PCR System. The results from the TRUPCR® HIV Viral Load Kit must be interpreted within the context of all relevant clinical and laboratory findings. An endogenous internal control has been integrated into the kit in order to check PCR inhibition.

PRODUCT HIGHLIGHTS

- **Takes advantage of the "hot start" technology to minimizing non-specific reactions and assuring maximum sensitivity & specificity**
- **No cross- reactivity with other pathogenic virus, bacteria or fungi.**



1 - https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases

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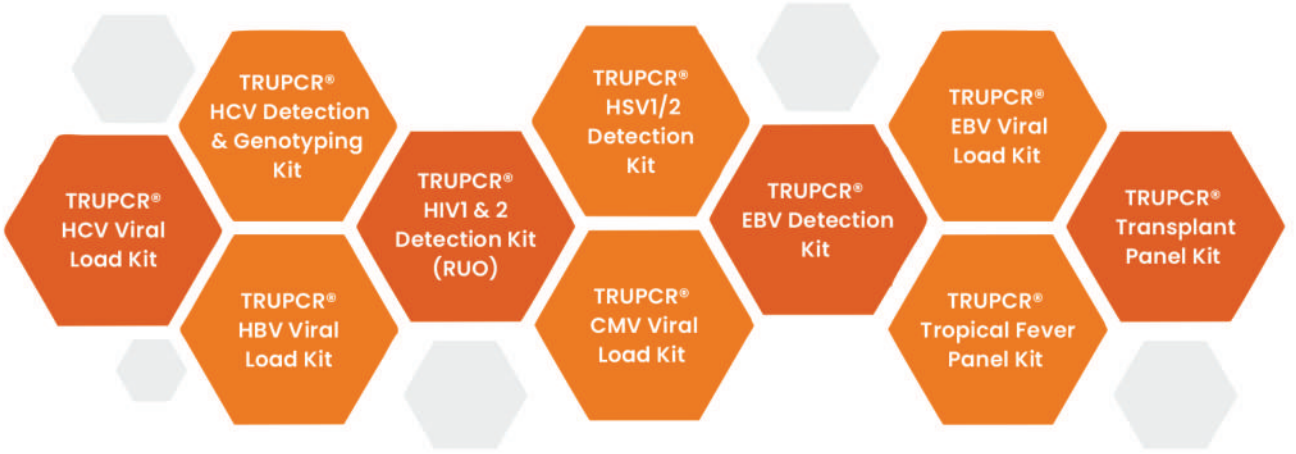
TRUPCR® HIV VIRAL LOAD KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Serum, plasma or blood (EDTA)
CLINICAL VALIDATION	More than 5,000 samples
REACTION VOLUME	50 µL
REACTION TIME	1 hr 50 min
LIMIT OF DETECTION	200 IU/ml
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, Roche - LC® 480 – II

OTHER TRUPCR® INFECTIOUS DISEASES PANELS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® HIV Viral Load Kit	3B257	48
	3B258	96
TRUPCR® Total Viral Nucleic Acid Extraction Kit	3B357	50
	3B358	100

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TRUPCR® MTBC ONE STEP NESTED KIT

MULTI DRUG RESISTANT - TUBERCULOSIS (MDR-TB)

Mycobacterium Genus Specific DNA	FAM
MTB Complex specific DNA	HEX
Endogenous Internal Control	Texas Red

Worldwide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent. A total of 1.4 million people died from TB in 2019. It is an air-born disease, spread one active TB patient to next through air, by their sneeze, spit and lungs cough. It is caused by Mycobacterium tuberculosis complex (MTC) that mainly affects the all age groups of people in the lungs, producing breathing difficulties. Nontuberculous mycobacteria (NTM) are opportunistic pathogens can cause infections in a wide variety of body sites, most commonly the lungs, Skin, soft tissue & Lymph nodes.

Culture which is the reference method for detection, requires at least 100 viable bacilli to obtain a positive culture with a turn-around time of between 2 and 10 weeks. Therefore, to adequately treat and effectively control MTC, there is a need for effective, rapid and accurate diagnosis.

SOLUTION BY TRUPCR®

TRUPCR® MTBC ONE STEP NESTED KIT accurately differentiates Mycobacterium tuberculosis complex (MTC) from non-tuberculosis Mycobacterium species (NTM) in a qualitative form from various sources of clinical samples using Real time PCR. The detection is achieved in one step nested PCR, the first amplification is subjected for specific amplification of M. tuberculosis. The second amplification is a nested PCR reaction, in order to achieve the maximum sensitivity and specificity of the test.

1 **Extraction**
MTB DNA from wide variety of clinical Specimen

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

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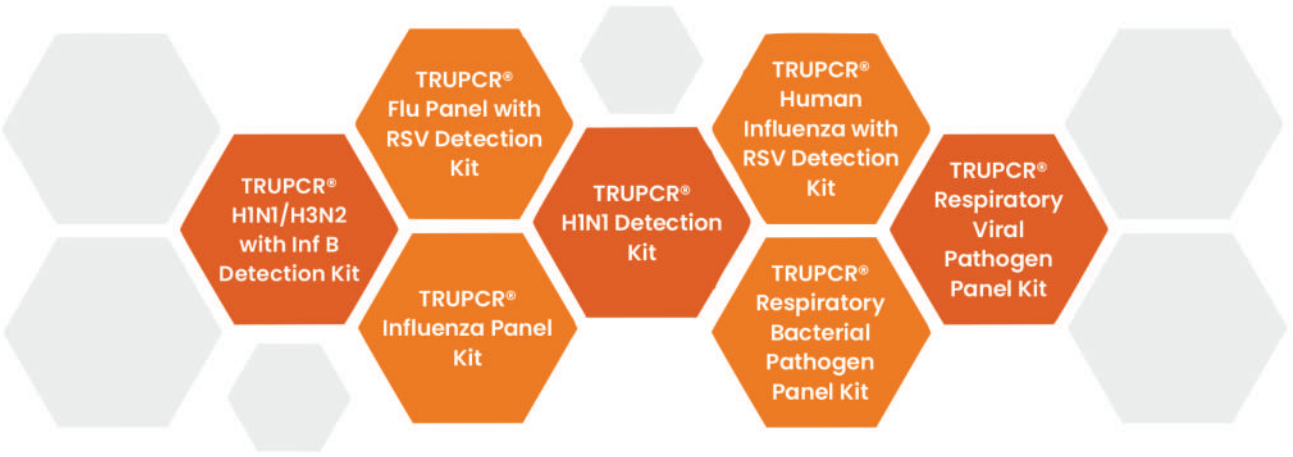
TRUPCR® MTBC ONE STEP NESTED KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Sputum, BAL, Urine, Pus, CSF, Aseptic fluid, Aseptic tissue and Other fluid samples of human origin
CLINICAL VALIDATION	Validated on more than 10000 clinical samples
REACTION VOLUME	30 µl in each tube
LIMIT OF DETECTION	≥ 10 CFU/ml for MTC and ≥ 100 CFU/ml for NTM.
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne Plus, QuantStudio® 3 & 5, Qiagen Rotor-Gene Q, Bio-Rad CFX96, Agilent AriaMx, MIC-4 PCR

OTHER TRUPCR® RESPIRATORY ASSAYS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® MTBC One Step Nested Kit	3B268	48
	3B269	96
TRUPCR® MTB/NTM DNA Extraction Kit	3B268E	50

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HPV AWARENESS CAMPAIGN

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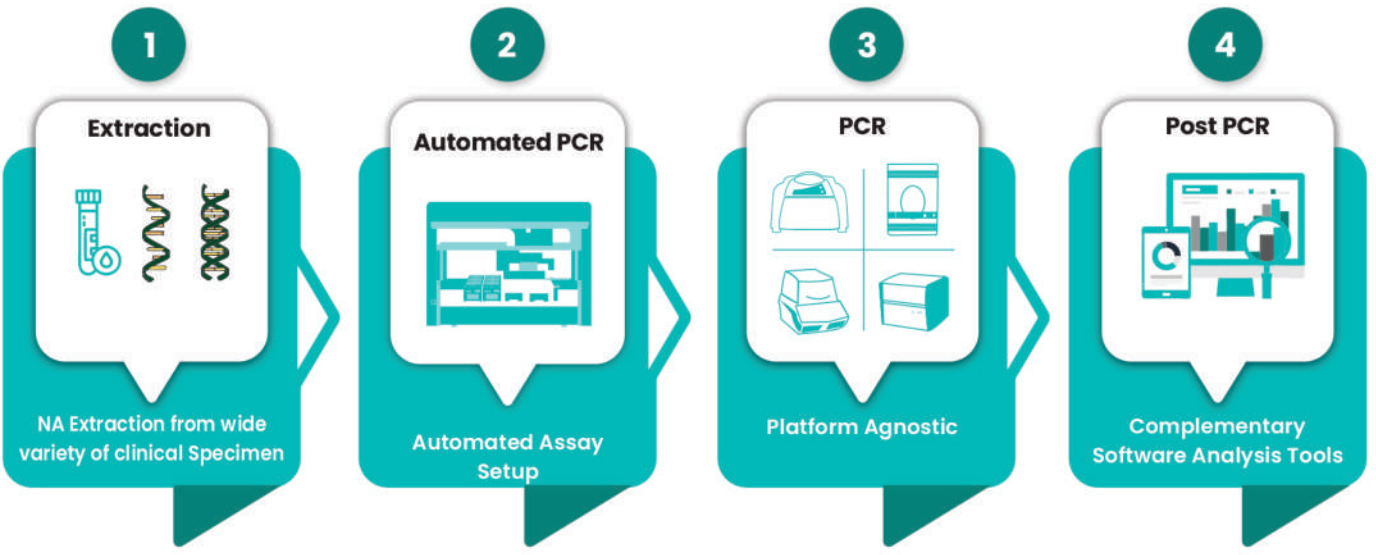
WOMEN'S HEALTH
TRUPCR® HPV ASSAYS

HUMAN PAPILLOMAVIRUSES (HPV)

Human Papilloma Virus (HPV) is the most widespread sexually transmitted virus affecting the reproductive tract and is the primary case of Cervical Cancer. There are over 200 identified HPV genotypes, which are categorized into high-risk and low-risk types based on their link to cervical cancer. Globally, cervical cancer is the fourth most common cancer in women, with around 660 000 new cases in 2022. In the same year, about 94% of the 350 000 deaths caused by cervical cancer occurred in low- and middle-income countries[1]. However, this risk can be significantly reduced through regular screening and early detection of high-risk HPV genotypes. Accurate identification of HPV genotypes plays a critical role in enabling comprehensive diagnosis and prognosis. It helps differentiate between benign infections and those with the potential to progress to cervical cancer. Compared with cervical screening methods identifying cytological abnormalities, molecular tests that specifically detect the presence of HR HPV DNA in cervical cells can potentially increase sensitivity and cost-effectiveness of cervical cancer screening programs. Furthermore, HPV DNA tests can be effectively used in triaging patients with equivocal cytology, in post-therapeutic follow-up and in monitoring vaccine efficacy. As per World Health Organization (WHO) guidelines, DNA testing is recommended as the primary method for cervical cancer screening[2].

SOLUTION BY TRUPCR®

TRUPCR® HPV Assays provide a reliable and efficient RT-PCR workflow for the detection and genotyping of high-risk HPV types. Covering both broad screening and targeted genotyping including high-risk and low risk markers, the assays are designed with high specificity and sensitivity targeting the E6/E7 regions of the HPV genome. Compatible with a wide range of clinical specimens and PCR platforms, these pre-filled, easy-to-use assays are supported by complementary software tools—ensuring accuracy, consistency, and ease from extraction to final analysis.



1 - https://www.who.int/news-room/fact-sheets/detail/cervical-cancer

2 - WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention (https://www.who.int/publications/i/item/9789240030824)

HPV AWARENESS CAMPAIGN

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TRUPCR® HPV HR WITH 16 & 18 DIFFERENTIATION KIT

The TRUPCR® HPV HR with 16 & 18 Differentiation Kit (Single tube) is an *in vitro* nucleic acid amplification assay for the detection of 14 high risk HPV Genotypes (16/18/31/33/35/39/45/51/52/56/58/59/66 and 68) along with the differentiation of HPV 16 & 18 DNA in clinical samples using Real time PCR system. The results from the TRUPCR® HPV HR with 16 & 18 Differentiation Kit (Single tube) must be interpreted within the context of all relevant clinical and laboratory findings. An Endogenous Internal Control is incorporated into the kit to verify the quality of samples, quality of extracted DNA, amplification procedure and possible presence of inhibitors, which may cause false negative results and this design, makes this kit highly reliable.

HPV HR	FAM
HPV 16	Texas Red
HPV 18	HEX
Endogenous IC	Cy5

KIT CONTAINS

• Multiplex Master Mix • HPV PPM • HPV Positive Control • Negative Control

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total nucleic acid from Cervical cells in liquid Media/Swab, Urine and FFPE tissue
CLINICAL VALIDATION	Validated on more than 2000 clinical samples
TARGET REGIONS	E6/E7 region of the HPV HR Genome
REACTION VOLUME	30 µl in each tube
REACTION TIME	90 Minutes
LOD DATA	10^3 copies/ml
COMPATIBLE INSTRUMENTS	QuantStudio® 5, Applied Biosystems™ 7500/7500 Fast, Applied Biosystems™ StepOne and StepOne Plus, Bio-Rad CFX96

TRUPCR® HPV HR GENOTYPING KIT

TRUPCR® HPV High Risk Genotyping Kit is an *in vitro* nucleic acid amplification assay for the qualitative detection & differentiation of different 14 HPV high risk genotypes including 16/18/31/33/35/39/45/51/52/56/58/59/66/68 from clinical specimens (Cervical cells in liquid media/swab, urine specimen and FFPE tissue samples) using Real time PCR method. Endogenous Internal Control is incorporated into the kit to verify the quality of samples, quality of extracted DNA, amplification procedure and possible presence of inhibitors, which may cause false negative results and this design, makes this kit highly reliable.

The results from the TRUPCR® HPV High Risk Genotyping Kit must be interpreted within the context of all relevant clinical and laboratory findings. The kit is intended to access the high-risk HPV DNA and aid in cervical cancer screening, early diagnostics and treatment.

HPV 59	FAM
HPV 18	HEX
HPV 56	Texa Red

HPV 33	FAM
HPV 31	HEX
HPV 35	Tex Red

HPV 58	FAM
HPV 45	HEX
HPV 68	Tex Red

HPV 52	FAM
HPV 39	HEX
HPV 51	Tex Red

HPV 16	FAM
HPV 66	HEX
Endogenous IC	Tex Red

KIT CONTAINS

• Multiplex Master Mix • HPV PPM-1
• HPV PPM-2 • HPV PPM-3 • HPV PPM-4
• HPV PPM-5 • HPV Positive Control
• Negative Control

HPV AWARENESS CAMPAIGN

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TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total nucleic acid from Cervical cells in liquid Media/Swab, Urine and FFPE tissue
CLINICAL VALIDATION	Validated on more than 2000 clinical samples
TARGET REGIONS	E6/E7 region of the HPV HR Genome
REACTION VOLUME	25 µl in each tube
REACTION TIME	90 Minutes
LOD DATA	100 IU/ml
COMPATIBLE INSTRUMENTS	QuantStudio® 3/5/12, Applied Biosystems™ 7500/7500 Fast, Applied Biosystems™ StepOne and StepOne Plus, Bio-Rad CFX96, Rotor-Gene Q, Roche - LightCycler® 480 –II

TRUPCR® HPV HIGH RISK GENOTYPING PLUS KIT

TRUPCR® HPV High Risk Genotyping Plus Kit is an *in vitro* nucleic acid amplification assay for the qualitative detection & differentiation of different 14 HPV high risk genotypes including 16/18/31/33/35/39/45/51/52/56/58/59/66/68 and two low risk genotypes 6 & 11 from clinical specimens (Cervical cells in liquid media/swab, urine specimen and FFPE tissue samples) using Real time PCR method. Endogenous Internal Control is incorporated into the kit to verify the quality of samples, quality of extracted DNA, amplification procedure and possible presence of inhibitors, which may cause false negative results and this design, makes this kit highly reliable.

The results from the TRUPCR® HPV High Risk Genotyping Plus Kit must be interpreted within the context of all relevant clinical and laboratory findings. The kit is intended to access the high-risk HPV DNA and aid in cervical cancer screening, early diagnostics and treatment.

HPV 59	FAM
HPV 18	HEX
HPV 56	Texa Red

HPV 33	FAM
HPV 31	HEX
HPV 35	Tex Red

HPV 58	FAM
HPV 45	HEX
HPV 68	Tex Red

HPV 52	FAM
HPV 39	HEX
HPV 51	Tex Red

HPV 16	FAM
HPV 66	HEX
Endogenous IC	Tex Red

HPV 6	FAM
HPV 11	HEX

KIT CONTAINS

- Multiplex Master Mix • HPV PPM-1
- HPV PPM-2 • HPV PPM-3 • HPV PPM-4
- HPV PPM-5 • HPV PPM-6
- HPV Positive Control
- Negative Control

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total nucleic acid from Cervical cells in liquid Media/Swab, Urine and FFPE tissue
CLINICAL VALIDATION	Validated on more than 2000 clinical samples
TARGET REGIONS	E6/E7 region of the HPV HR Genome
REACTION VOLUME	25 µl in each tube
REACTION TIME	90 Minutes
LOD DATA	100 IU/ml
COMPATIBLE INSTRUMENTS	QuantStudio® 3/5/12, Applied Biosystems™ 7500/7500 Fast, Applied Biosystems™ StepOne and StepOne Plus, Bio-Rad CFX96, Rotor-Gene Q, Roche - LightCycler® 480 –II

HPV AWARENESS CAMPAIGN

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ORDERING INFORMATION

TRUPCR® HPV HR WITH 16 & 18 DIFFERENTIATION KIT

Qualitative detection of 14 High-Risk HPV Genotypes & differentiation of HPV 16 & 18 genotypes of Human papilloma viruses (HPV) on Real-Time PCR

3B1439 | 48
3B1440 | 96

TRUPCR® HPV HR GENOTYPING KIT

Qualitative detection & genotyping of 14 High Risk Human papilloma viruses (HPV) on Real-Time PCR

3B1423 | 48
3B1424 | 96

TRUPCR® HPV HIGH RISK GENOTYPING PLUS KIT

Qualitative detection and genotyping of 14 High Risk & 2 low risk (6 & 11) Genotypes of Human papilloma viruses (HPV) on Real-Time PCR

3B1437 | 48
3B1438 | 96

PUBLICATIONS

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- Zheng, Ziwen, et al. "Prognostic value of HPV 16/18 genotyping and geminin mRNA quantification in low-grade cervical squamous intraepithelial lesion." Bioengineered 12.2 (2021): 11482-11489.
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- Jwala, M., et al. "Prognostic Footprints of HPV Genotyping in Locally Advanced Carcinoma Cervix–A Single Institutional Study." International Journal of Radiation Oncology, Biology, Physics 114.3 (2022): e256-e257.
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- Kulkarni, Sayali P., Shruti Paliwal, and Susmit Kosta. "Genotypic Diversity of Human Papillomavirus (HPV) Types and Its Prevalence With Cervical Cancer (CC) in Central India." Cureus 15.2 (2023).
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- Kothari V, Khullar S, TS H (April 15, 2024) Prevalence of Genotype Patterns Associated With High-Risk Human Papillomavirus in Cervical Lesions. Cureus 16(4): e58300. DOI 10.7759/cureus.58300
- Sharma, Ayushi & Vyas, Nitya & Saraswat, Pushpendra & Kumar, Mr & Demonstrator, Senior & Scholar, Phd. (2024). Comparative Analysis of HPV DNA Testing and Pap Smear Screening: Evaluating Their Efficacy in Cervical Cancer Prevention and Early Detection Strategies. International Journal of Life Science and Pharma Research. 13, No 12. 21-26. 10.69605/ijlbpr_13.12.2024.5.
- Purwar, Shashank; Gupta, Shipra; John, Julie Hansa1; Gupta, Priyal; Halder, Ajay1. Study to Determine Concordance between High-Risk Human Papilloma Virus DNA Detection in Self Collected First Voided Urine Samples and Health-Care Worker Collected Cervical Samples in a Subset of Women with Proven Histopathological Precancerous and Cancerous Lesions of the Cervix. Journal of Mid-life Health 14(1):p 8-14, Jan–Mar 2023. | DOI: 10.4103/jmh.jmh_251_22

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TRUPCR® ACUTE LEUKEMIA PANEL KIT

CBFB-MYH11 | BCR-ABL1 | PML-RARA | AML1-ETO | E2A-PBX1 | TEL-AML1 | MLL-AF4 | MLL-ENL | MLL-AF9 | MLL-AF6 | MLL-AF10 | RBM15-MKL1 | DEK-CAN | SET-CAN | C-KIT | NPM1 | FLT3 | IDH1 | IDH2

TRUPCR® ACUTE LEUKEMIA PANEL KIT

Leukemia is defined as neoplastic proliferation of abnormal white blood cells (WBCs) and Acute Myeloid Leukemia (AML) is a group of hematological diseases, phenotypic and genetically heterogeneous, characterized by clonal expansion of myeloid precursors with diminished capacity for differentiation. AML represents 15 to 20% of acute leukemia cases in children and 80% in adults. Acute Lymphoblastic Leukemia (ALL) is mainly a disease of childhood that arises from recurrent genetic alterations that block precursor B- and T-cell differentiation and drive aberrant cell proliferation and survival. Usually one or more molecular abnormalities are found in acute leukemias and because of this configure a strong prognostic factor within the WHO classification. Currently molecular markers are the most important for risk stratification and treatment of leukemia patients.

SOLUTION BY TRUPCR®

The TRUPCR® Acute Leukemia Panel Kit is intended for the qualitative detection of diagnostic and prognostic markers of Acute Myelogenous Leukemia (AML) and Acute Lymphoblastic Leukemia (ALL) in peripheral blood samples using real-time PCR.

01	AML1-ETO	FAM	
02	CBFB-MYH11	FAM	
03	BCR-ABL1 Major	FAM	
04	BCR-ABL1 Minor/Micro	FAM	
05	PML RARA	FAM	
06	E2A-PBX1	FAM	
07	TEL-AML1	FAM	
08	MLL-AF4	FAM	
09	MLL-ENL	FAM	
10	MLL-AF9	FAM	
11	MLL-AF6	FAM	
12	MLL-AF10	FAM	
13	RBM15-MKL1	FAM	
14	DEK-CAN	FAM	
15	SET-CAN	FAM	
16	ABL1	FAM	
17	C-KIT	FAM	
18	NPM1	FAM	
19	FLT3-TKD	FAM	
20	REF	FAM	
21	IDH 1/2	FAM	
22	IDH 1/2	FAM	
23	FLT3-ITD	FAM	

1 **Extraction**

DNA & RNA Extraction from EDTA Blood/Bone Marrow

2 **Assay Setup**

Automated Assay Setup

3 **PCR**

Platform Agnostic

4 **Post PCR**

Complementary Software Analysis Tools

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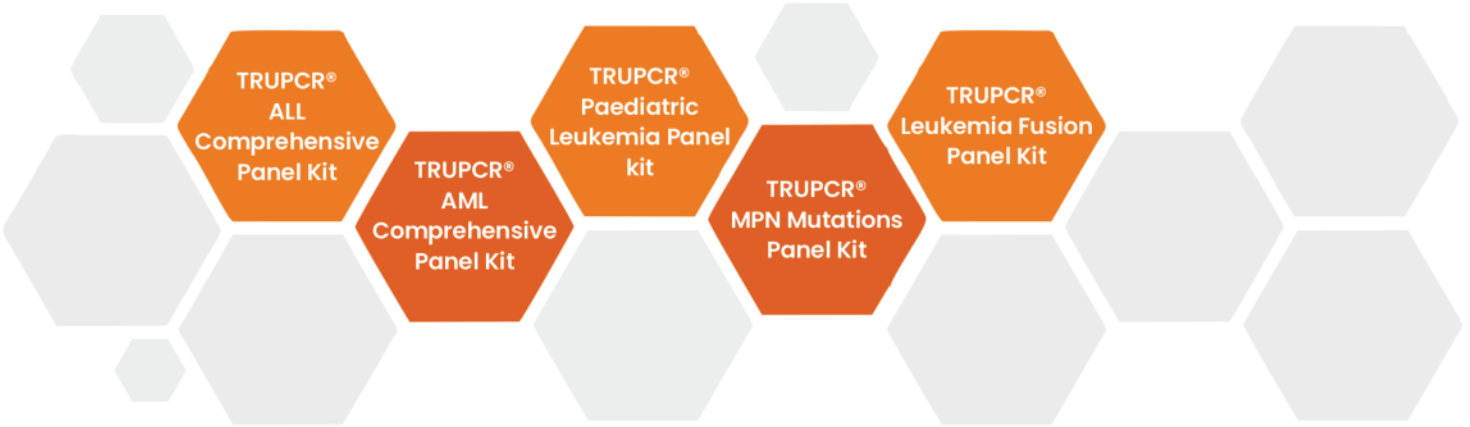
TRUPCR® ACUTE LEUKEMIA PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	EDTA Blood / Bone Marrow
ALL INCLUSIVE KIT	All reagents for cDNA chemistry, PCR and real-time PCR are included
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II
SENSITIVITY	Detect up to 10 copies of fusion transcripts (AML1-ETO, CBFB-MYH11, BCR-ABL1, PML-RARA, E2A-PBX1, TEL-AML1, MLL-AF4, MLL-ENL, MLL-AF9, MLL-AF6, MLL-AF10, RBM15-MKL1, DEK-CAN and SET-CAN) and to 1% mutant allele in background of 99% wild type allele for C-KIT, NPM1,and FLT3-D835, I836 & ITD and to 5% mutant allele in background of 95% wild type allele IDH1/2.

OTHER TRUPCR® ONCOLOGY PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Acute Leukemia Panel Kit	3B1406	24
	3B1407	48
TRUPCR® Panel Extraction Kit	3B1401E	50

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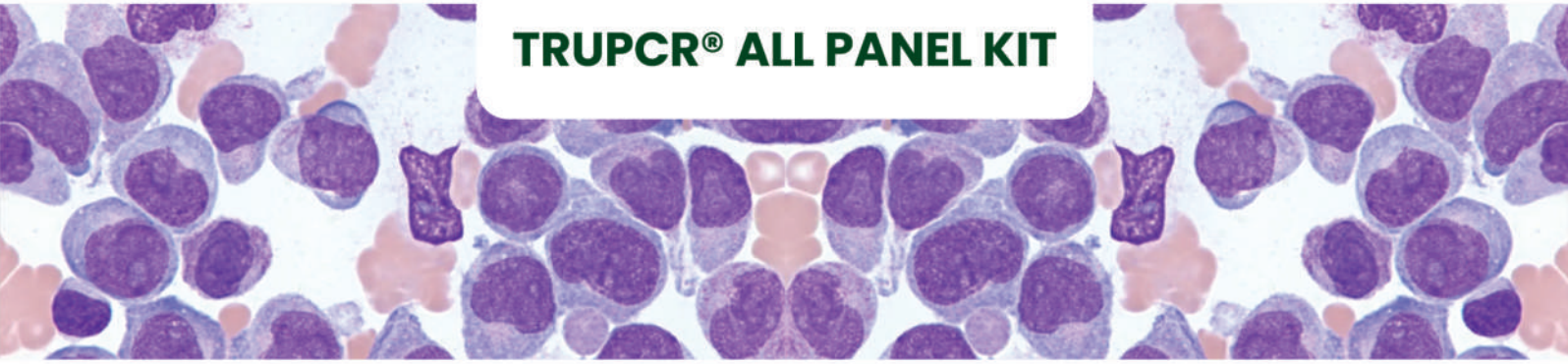
TRUPCR® ALL PANEL KIT



Acute Lymphoblastic Leukemia (ALL)

Leukemia is defined as neoplastic proliferation of abnormal white blood cells (WBCs) and Acute Lymphoblastic Leukemia (ALL) is mainly a disease of childhood that arises from recurrent genetic alterations that block precursor B- and T-cell differentiation and drive aberrant cell proliferation and survival. Due to the advances in the cytogenetic and molecular characterization of the acute leukemias in the past two decades, genetic alterations can now be identified in more than 80% of cases of ALL.

With the advent of new technologies, the detection and characterization of genetic alterations such fusion genes have begun to play an important role in how the disease is approached. These chromosomal translocation influences the prognosis and therapeutic approach used for treatment of ALLs.

E2A-PBX1	TCF3-PBX1
TEL-AML1	BCL2L14-RUNX1
MLL-AF4	MLL_AF4_e10-e4 MLL_AF4_e9-e4 MLL_AF4_e9-e5 MLL_AF4_e11-e4 MLL_AF4_e9-e6
MLL-ENL	MLL_ENL_e9-e2 MLL_ENL_e10-e2
MLL-AF9	MLL_AF9_e8-e9 MLL_AF9_e8-e10 MLL_AF9_e10-e6
MLL-AF6	MLL_AF6_e9-e2
MLL-AF10	MLL_AF10_e9-e4
BCR-ABL1	e13a2 & e14a2 (p210) e1a2 (p190) e19a2(p230)

SOLUTION BY TRUPCR®

Recent evidence shows that the identification of new ALL biomarkers contributes to a better understanding of the molecular basis of the disease, are significantly useful in screening, diagnosis, prognosis and monitoring of ALL, as well as the possibility of predicting each individual´s response to treatment. TRUPCR® provides solution for detection of most relevant molecular biomarkers associated with Acute Lymphoblastic Leukemia and discusses their clinical importance in terms of risk prediction, diagnosis and prognosis.

TRUPCR® ALL Panel Kit is intended for the qualitative detection of diagnostic and prognostic markers of Acute Lymphoblastic Leukemia in peripheral blood or bone marrow samples using real time PCR system. TRUPCR® ALL Panel kit requires cDNA as template. The RNA should be extracted from the samples and then it should be converted to cDNA using given components in kit.

1 **Extraction**
NA Extraction from EDTA Blood/Bone Marrow

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

1 - https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

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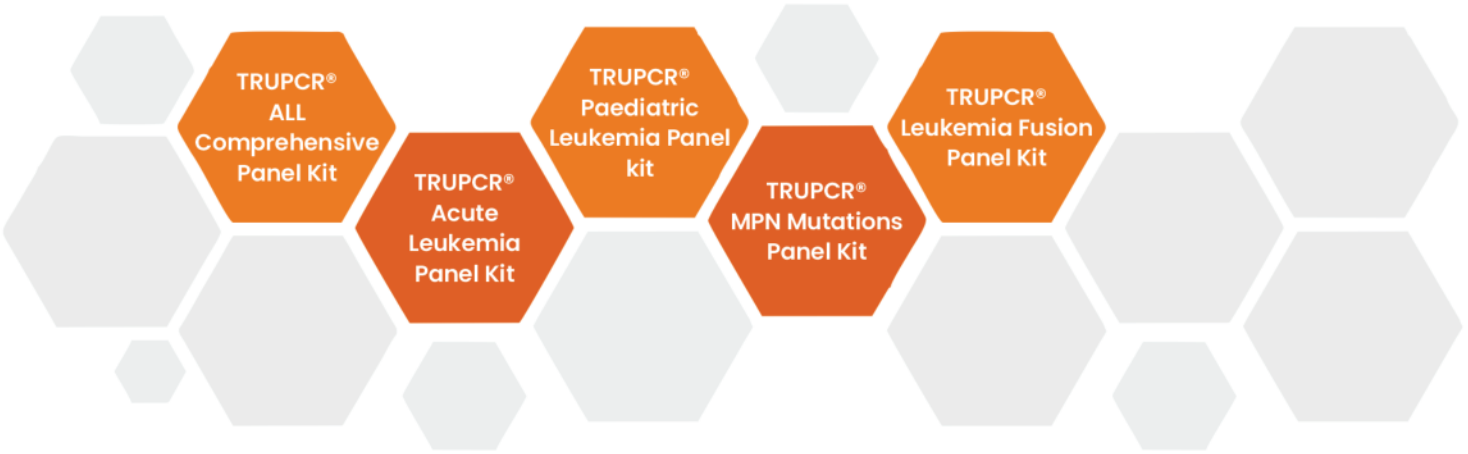
TRUPCR® ALL PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	EDTA Blood / Bone Marrow
ALL INCLUSIVE KIT	All reagents for cDNA chemistry, PCR and real-time PCR are included
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, StepOne series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II
SENSITIVITY	Detect up to 10 copies of fusion transcripts (AML1-ETO, CBFB-MYH11, BCR-ABL1, PML-RARA, RBM15-MKL1, DEK-CAN, SET-CAN) and up to 1% mutant allele in background of 98% wild type allele (c-KIT, NPM1, FLT3-ITD and FLT3-D835 & I836)

OTHER TRUPCR® ONCOLOGY PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® ALL Panel Kit	3B1405	24
	3B1408	48
TRUPCR® Panel Extraction Kit	3B1401E	50

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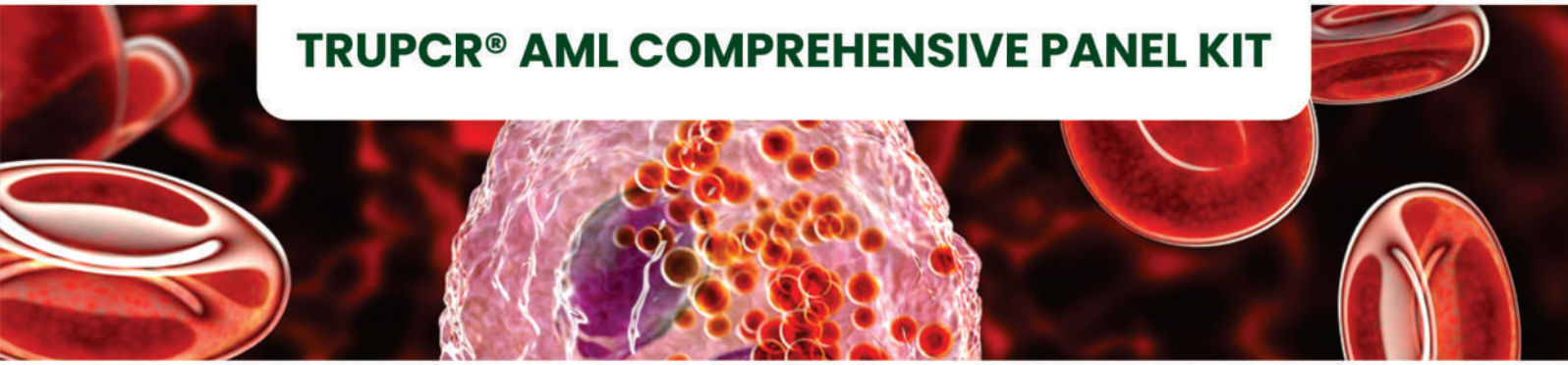
TRUPCR® AML COMPREHENSIVE PANEL KIT



ACUTE MYELOID LEUKEMIA (AML)

Leukemia is defined as neoplastic proliferation of abnormal white blood cells (WBCs) and Acute Myeloid Leukemia (AML) is a group of hematological diseases, phenotypic and genetically heterogeneous, characterized by clonal expansion of myeloid precursors with diminished capacity for differentiation. AML represents 15 to 20% of the acute leukemia cases in children and 80% in adults. Usually one or more cytogenetic abnormalities are found in approximately 55% of patients with AML, and because of this it configures a strong prognostic factor within the WHO classification. With the advent of new technologies, the detection of molecular markers such as point mutations, fusion genes and characterization of epigenetic and proteomic profiles, have begun to play an important role in how the disease is approached.

01	AML1-ETO	FAM	08	SET-CAN	FAM
02	CBFB-MYH11	FAM	09	ABL1	FAM
03	BCR-ABL1 Major	FAM	10	C-KIT	FAM
04	BCR-ABL1 Minor	FAM	11	NPM1	FAM
05	PML-RARA	FAM	12	FLT3-TKD	FAM
06	RBM15-MKL1	FAM	13	REF	FAM
07	DEK-CAN	FAM	14	FLT3-ITD	FAM

SOLUTION BY TRUPCR®

TRUPCR® provides solution for detection of most relevant molecular biomarkers associated with AML and discusses its clinical importance in terms of risk prediction, diagnosis and prognosis.

TRUPCR® AML Panel Kit is intended for the qualitative detection of diagnostic and prognostic markers of Acute Myelogenous Leukemia in peripheral blood or bone marrow samples using real-time and conventional PCR system. It requires cDNA as template for fusion gene and DNA for other mutation detection. The DNA & RNA both should be extracted from the samples and then RNA should be converted to cDNA using kit components.

1 **Extraction**
DNA & RNA Extraction from EDTA Blood/Bone Marrow

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

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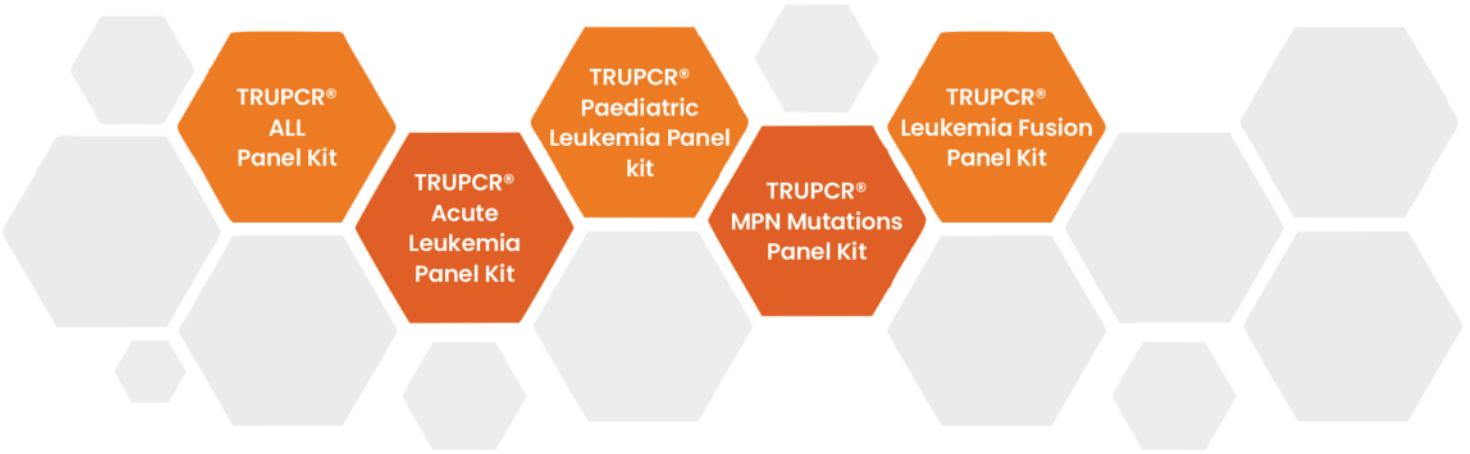
TRUPCR® AML COMPREHENSIVE PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	EDTA Blood / Bone Marrow
ALL INCLUSIVE KIT	All reagents for cDNA chemistry, PCR and real-time PCR are included
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II
SENSITIVITY	Detect up to 10 copies of fusion transcripts (AML1-ETO, CBFB-MYH11, BCR-ABL1, PML-RARA, RBM15-MKL1, DEK-CAN, SET-CAN) and up to 1% mutant allele in background of 98% wild type allele (c-KIT, NPM1, FLT3-ITD and FLT3-D835 & I836)

OTHER TRUPCR® ONCOLOGY PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® AML Panel Kit	3B1401	24
	3B1402	48
TRUPCR® Panel Extraction Kit	3B1401E	50

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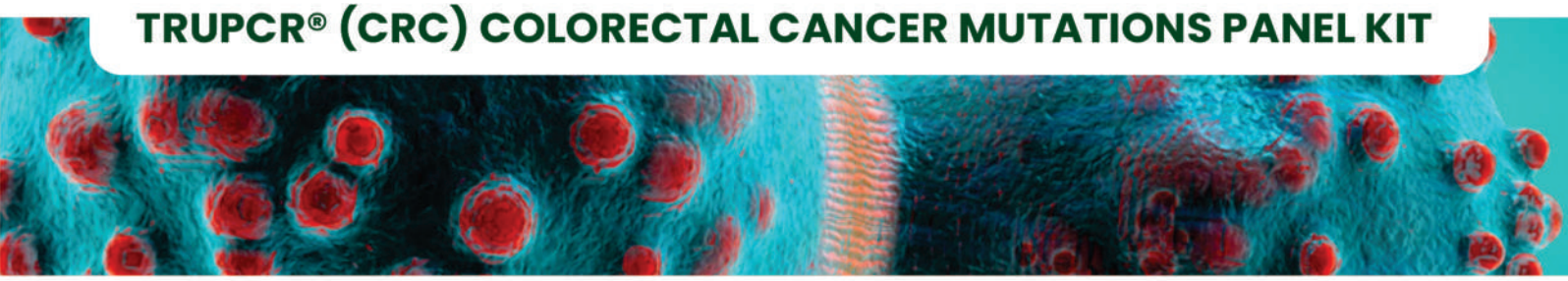
TRUPCR® (CRC) COLORECTAL CANCER MUTATIONS PANEL KIT



53 CRC MUTATIONS

KRAS

c.35G>C	c.35G>A	c.34G>C	c.35G>T	c.38G>A	c.34G>T	c.34G>A
c.175G>A	c.176C>A	c.176C>G	c.183A>C	c.183A>T	c.182A>T	c.182A>G
c.351A>C	c.351A>T	c.350A>G	c.349A>G	c.436G>A	c.436G>C	c.437C>T
c.181C>A						

NRAS

c.35G>A	c.34G>T	c.34G>A	c.35G>C	c.35G>T	c.38G>A
c.37G>C	c.38G>T	c.350A>G	c.183A>C	c.183A>T	c.181C>A
c.182A>T	c.182A>G	c.182A>C	c.176C>A	c.175G>A	c.436G>A
c.34G>C	c.38G>C	c.37G>T	c.37G>A	c.351G>T	c.351G>C

BRAF

c.1799T>A	c.1799_1800TG>AAA	c.1799_1800TG>AT	c.1798_1799GT>AA
c.1799T>G	c.1798G>A	c.1798G>A	

PRODUCT HIGHLIGHTS

- Detects a total of 53 relevant biomarker mutations.
- The clinically relevant biomarkers include 22 mutations of KRAS, 24 mutations of NRAS and 7 mutations of BRAF.
- Sensitive to detect up to 1% - 5% mutations in KRAS, NRAS and BRAF genes
- Compatible Instruments – Applied Biosystems™ 7500 series, QuantStudio® series, Bio-Rad CFX96, CFX384 and Aria Mx Real-Time PCR

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® Colorectal Cancer Mutations Detection Kit	3B1413	24
	3B1414	48

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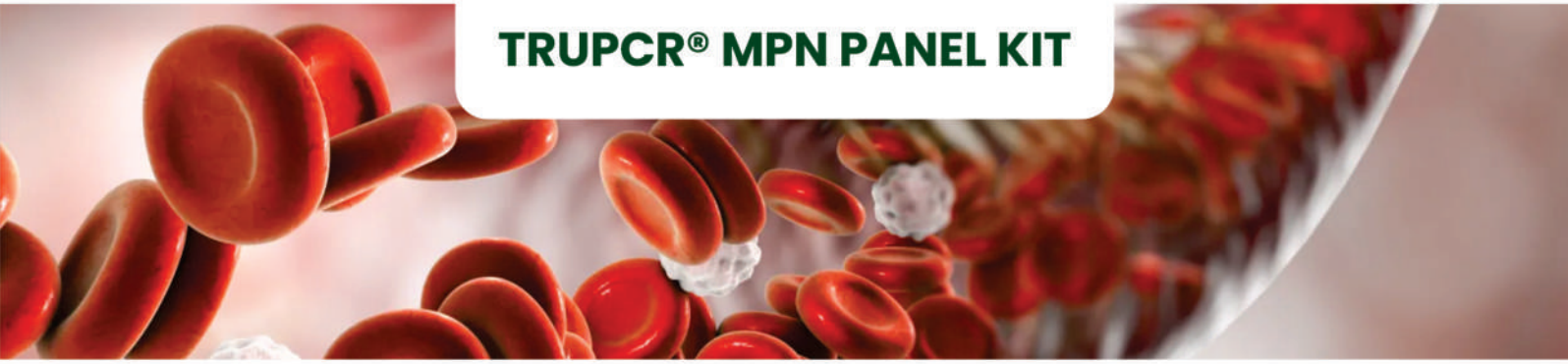
TRUPCR® MPN PANEL KIT



Myeloproliferative Neoplasms (MPN)

Myeloproliferative Neoplasms (MPN) are a group of diseases that are caused by an overproduction of one or more blood cell types (red cells, white cells or platelets) in the bone marrow. Based on the presence or absence of the "Philadelphia Chromosome" (BCR-ABL1 translocation), MPNs are broadly grouped into two categories – Ph+ (Chronic Myeloid Leukemia) and Ph- (Polycythemia Vera (PV), Essential Thrombocythemia (ET) and Myelofibrosis (MF) MPNs. Mutations in one of four genes—JAK2, MPL, CALR, and CSF3R—can be found in the vast majority of patients with MPN and represent driver mutations that can induce the MPN phenotype.

Ph+ is characterized by the BCR-ABL1 translocation, t(9;22) (q34;q11.2), which leads to creation of the constitutively active oncogenic BCR-ABL1 fusion tyrosine kinase. This translocation is the most common abnormality in CML. Simultaneous identification of important mutations at diagnosis will provide additional clinically useful prognostic information that can be used to select more appropriate treatment strategies for patients.

SOLUTION BY TRUPCR®

The TRUPCR® MPN Panel Kit is intended for the qualitative detection of diagnostic and prognostic markers of Myeloproliferative Neoplasms in peripheral blood or bone marrow samples using Real-Time PCR system. TRUPCR® MPN Panel Kit requires cDNA as template for BCR-ABL1 and DNA for detection of DNA based mutations. The DNA and RNA both should be extracted from the samples and then RNA should be converted to cDNA using components provided in the kit.

01	Major BCR ABL1	FAM
02	Minor BCR ABL1	FAM
03	ABL1	FAM
	Internal Control	VIC
04	MPL W515K	FAM
	Internal Control	VIC
05	MPL W515K	FAM
	Internal Control	VIC
06	MPL W515A	FAM
	Internal Control	VIC
07	MPL S505N	FAM
	Internal Control	VIC
08	CALR Type I	FAM
	Internal Control	VIC
09	CALR Type II	FAM
	Internal Control	VIC
09	JAK2 V617F Mutant	FAM
	JAK2 Wild Type	VIC

1 **Extraction**

DNA & RNA Extraction from EDTA Blood/Bone Marrow

2 **Assay Setup**

Automated Assay Setup

3 **PCR**

Platform Agnostic

4 **Post PCR**

Complementary Software Analysis Tools

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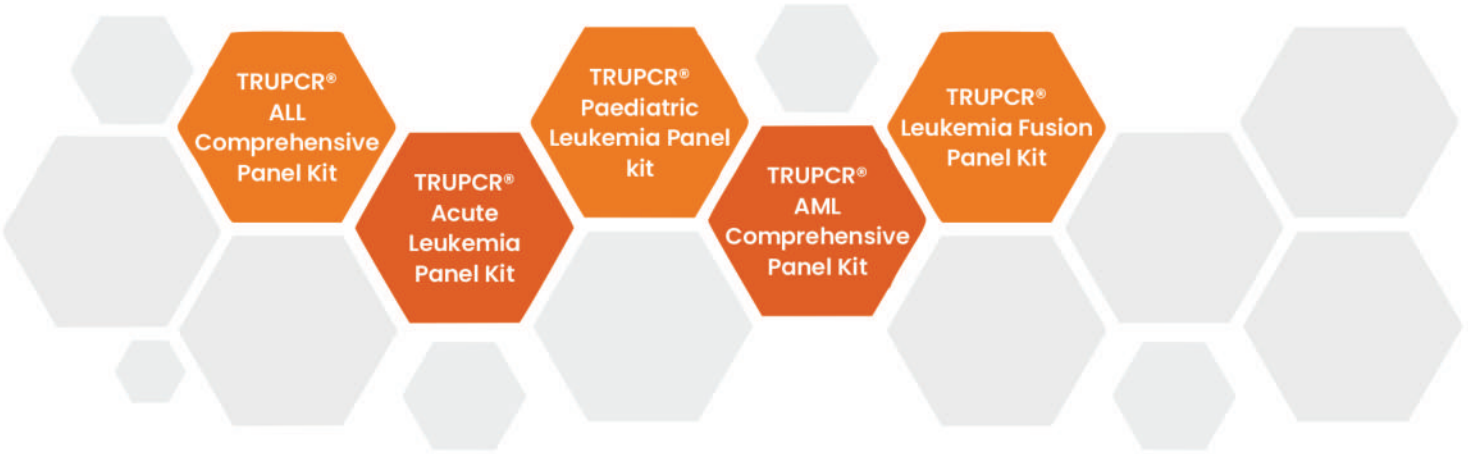
TRUPCR® MPN PANEL KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	EDTA Blood / Bone Marrow
ALL INCLUSIVE KIT	All reagents for cDNA chemistry, PCR and real-time PCR are included
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II
SENSITIVITY	Detect up to 10 copies of fusion transcripts BCR-ABL1 and up to 1% mutant allele in background of 99% wild type allele for JAK 2, CALR and MPL genes

OTHER TRUPCR® ONCOLOGY PANEL KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® MPN Panel Kit	3B1303	24
	3B1304	48
TRUPCR® Panel Extraction Kit	3B1401E	50

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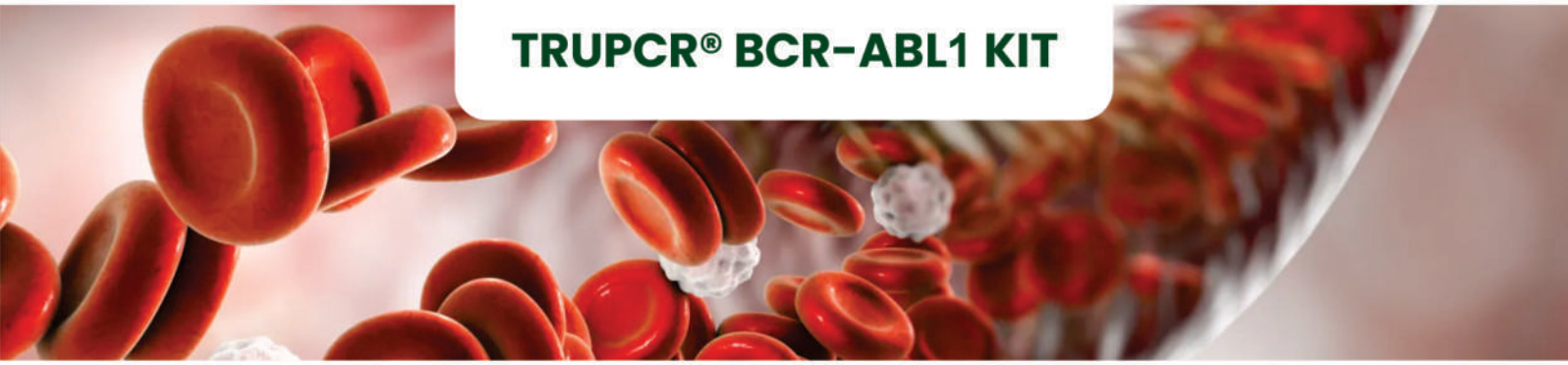
TRUPCR® BCR-ABL1 KIT



Chronic Myeloid Leukaemia (CML)

Approximately 95% of cases of Chronic Myeloid Leukaemia (CML) and about 35% of Acute Lymphoblastic Leukaemia (ALL) are associated with the presence of a t(9;22) (q34;q11) chromosomal translocation (Philadelphia chromosome, Ph). This results in creation of an oncogenic fusion gene between ABL proto-oncogene and BCR on chromosomes 9 and 22, respectively. The two most common fusion variants are called b2a2 and b3a2, which encode for a constitutively active chimeric tyrosine kinase of 210kDa (P210).

Tyrosine kinase inhibitors, such as STI-571 (imatinib; IM) have been shown to greatly inhibit the growth of tumor cells and reduce the patient's risk of reaching "blast crisis", the final phase of CML associated with decreased response and short survival. Complete cytogenetic response is achieved quite rapidly in CML patients treated with IM, thus a sensitive method to detect & quantify the fusion gene transcripts is required to accurately assess the response during therapy.

SOLUTION BY TRUPCR®

TRUPCR® BCR-ABL1 Kit is a Real-Time amplification test for the detection, differentiation & quantification of all three breakpoint cluster regions i.e. major/P210 (M-bcr), minor/P190 (m-bcr) and micro/P230 (mu-bcr) in bone marrow or peripheral blood samples. The assay has separate tubes for all the transcripts making it one of the most unique and comprehensive solution currently available.

The TRUPCR® BCR-ABL Kit takes chronic myeloid Leukaemia (CML) monitoring to a new level of sensitivity (MR4.7) to detect deep molecular response (DMR). It is a two-step protocol in which total RNA from patient's peripheral blood or bone marrow is isolated, the RT enzyme reverse transcribes total RNA and yields single-stranded cDNA. A high positive control RNA is also included to monitor the reverse transcription and amplification steps of ABL1 and BCR-ABL during transcript quantification. The kit includes reagents for reverse transcription-PCR and real-time PCR.

KEY FEATURES

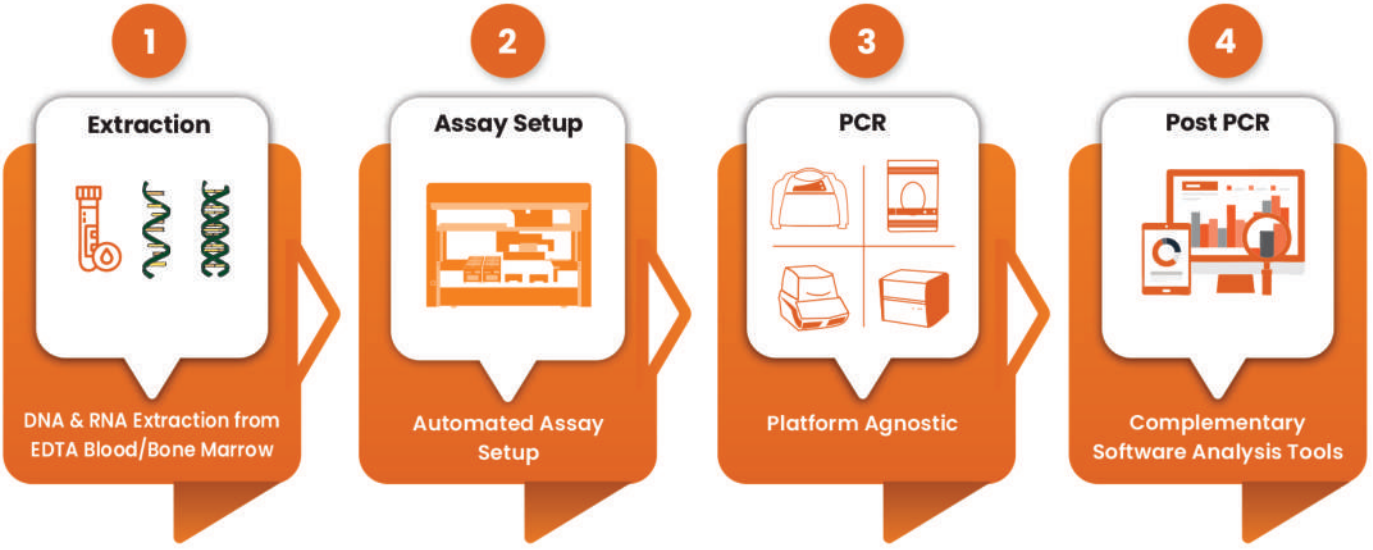
COMPREHENSIVE
Quantitation of BCR-ABL1 Major (P210) WHO IS, Minor (P190) & Micro (P230) transcripts

ADAPTABLE
Kits are platform agnostic and validated over several Real-Time PCR instruments

TRUSTABLE
CE marked IVD GMP Compliant manufacturing facility approved by Indian FDA ISO 13485 Certified company

COMPLETE
Kits come with RNA extraction, cDNA and qPCR reagents. All one needs is a PB or BM sample

RELIABLE
Reporting on WHO International Scale



1. Neetu Singh et al. 2018; Differential genomics and transcriptomics between tyrosine kinase inhibitor-sensitive and -resistant BCR-ABL-dependent chronic myeloid leukaemia. Oncotarget, 2018, Vol. 9, (No. 54), pp: 30385-30418 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6084383/)
2. B.Das et al. 2018. H007. Evaluation of Performance of Two Commercially Available BCR-ABL Real-time PCR Assays for Deep Molecular Response in International Scale. AMP Abstracts, Pg no 917, The Journal of Molecular Diagnostics (https://amp18.amp.org/AMP/assets/File/JMDPublishedAbstracts_November2018.pdf?pass=42)

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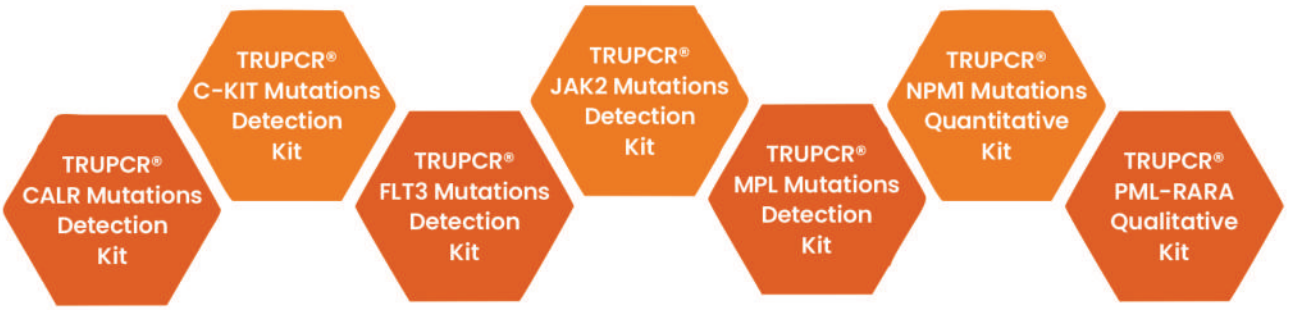
TRUPCR® BCR-ABL1 KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	EDTA Blood / Bone Marrow
REFERENCE MATERIAL	Sensitivity of MR 4.7 Based on Rigorous Testing Criteria
LIMIT OF DETECTION	Measuring standards are calibrated to European reference material
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II

OTHER TRUPCR® ONCOLOGY KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® BCR-ABL1 Quantitative Kit – Major (WHO IS)	3B1251	48
	3B1252	96
TRUPCR® BCR-ABL1 Quantitative Kit – Minor	3B1291	24
	3B1292	48
TRUPCR® BCR-ABL1 Quantitative Kit – Major (WHO IS), Minor, Micro	3B1267	48
	3B1268	96
TRUPCR® Blood RNA Extraction Kit	3B1200	50

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TRUPCR® EGFR Mutations Detection Kit

59 EGFR MUTATIONS

EXON 18

G719S (2155G>A)	G719C (2155G>T)	G719A (2156G>C)	G719D (2156G>A)

EXON 19 Deletion

(2235-2249del15)	(2236-2250del15)	(2240-2257del18)	(2240-2254del15)	(c.2234-2248del15)	(c.2239-2262del24)	(c.2237-2253>TTCCT)
(2239-2248TTAAGAGAAG>C)		(2237-2255>T)	(2239-2256del18)	(2237-2251del15)	(2239-2253del15)	(c.2236-2248>AGAC)
(2239-2251>C)	(2239-2247del9)	(2235-2246del12)	(2239-2258>CA)	(2240-2251del12)	(2237-2254del18)	(c.2236-2248>CAAC)
(2238-2248>GC)	(2238-2255del18)	(2235-2252>AAT)	(2238-2252>GCA)	(2236-2253del18)	(c.2233-2247del15)	(c.2237-2256>TC)
(c.2235-2248>AATTC)	(c.2237-2257>TCT)	(c.2235-2251>AATTC)	(c.2237-2252>T)	(c.2237-2253>TTGCT)	(c.2239-2256>CAA)	(c.2254-2277del24)
(c.2253-2276del24)	(c.2235-2255>AAT)	(c.2238-2252del15)	(c.2239-2252>CA)	(c.2237-2253>TC)	(c.2236-2256del21)	
(c.2252-2277>AT)	(c.2252-2276>A)		(c.2252-2275del24)		(c.2248-2273>CC)	

EXON 20

T790M (2369C>T)	S768I (2303G>T)	C797S (2389T>A)	C797S (2390G>C)	(2310-2311insGGT)
(2319-2320insCAC)	(c.2311-2312insGCGTGGACA)		(2307-2308insGCCAGCGTG)	(c.2309-2310AC>CCAGCGTGGAT)

EXON 21

L858R (2573T>G)	L861Q (2582T>A)

PRODUCT HIGHLIGHTS

- Sample Type – DNA extracted from Formalin Fixed Paraffin-Embedded (FFPE) tissue and Liquid Biopsy
- Target Regions – Detects 59 different mutations of exon 18, 19, 20 & 21
- LoD – Sensitive to detect up to 1%-5% mutation in EGFR gene with input of 5-20ng of DNA
- Compatible Instruments – Applied Biosystems™ 7500 series, QuantStudio® series, Bio-Rad CFX96,CFX384 and Aria Mx Real-Time PCR

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® EGFR Mutations Detection Kit	3B1311	24
	3B1312	48

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TRUPCR® IDH1/2 DETECTION & DIFFERENTIATION KIT

NEED

Isocitrate dehydrogenase (IDH) consists of enzymes from IDH1 and IDH2 playing a critical role in cellular metabolism through the conversion of isocitrate to alpha-ketoglutarate and the production of NADPH. Mutations in IDH1 and IDH2 can lead to cancer-related 2- hydroxyglutarate production, commonly found in acute myeloid leukemia, SNUCs and gliomas. Recent advancements show focused mutational testing, especially using quantitative PCR, that can offer a more efficient method for identifying IDH mutations to inform targeted therapies.

Real-Time PCR Kit offers faster turn-around-time (TAT) and higher sensitivity compared to Sanger sequencing, and is more cost effective than Next-Gen Sequencing (NGS).

Mutation	Nucleotide Change Detection	Remarks
IDH1 R132H	R132H 395G>A	-
IDH1 R132C	R132C 394C>T	-
IDH1 R100Q	R100Q 299G>A	-
IDH1 R132x	R132S (394C>A)	It detects 4 mutations but does not distinguish between them.
	R132G (394C>G)	
	R132L (395G>T)	
	R132V (394_395delinsGT)	
IDH2 R172K	R172K 515G>A	-
IDH2 R140x	R140W (418C>T)	It detects 2 mutations but does not distinguish between them.
	R140Q (419G>A)	
IDH2 R172x	R172S (516G>C)	It detects 5 mutations but does not distinguish between them.
	R172S (516G>T)	
	R172M (515G>T)	
	R172G (514A>G)	
	R172W (514A>T)	
Reference	Detects region without any polymorphism/mutation.	

SOLUTION BY TRUPCR®

TRUPCR® IDH1/2 Detection & Differentiation Kit is a real-time PCR based in vitro diagnostic test for the qualitative detection of 7 mutations of IDH1 gene and 8 mutations of IDH2 gene, with differentiation of 4 key mutations in the genomic DNA extracted from human blood (EDTA) or bone marrow (EDTA) and formalin-fixed, paraffin-embedded (FFPE) human tissue.

TECHNICAL SPECIFICATIONS

Sample Type	Human genomic DNA extracted from human blood (EDTA) or bone marrow (EDTA) and formalin-fixed, paraffin-embedded (FFPE) human tissue
Run Time	90 Minutes
Reaction Volume	20µl in each tube
Limit of Detection	5% variant allele frequency
Compatible Instruments	Applied Biosystems™ 7500 series QuantStudio® series, Bio-Rad CFX96, Qiagen Rotor-gene™ Q

ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® IDH1/2 Detection & Differentiation Kit	3B1337	24
TRUPCR® IDH1/2 Detection & Differentiation Kit	3B1338	48

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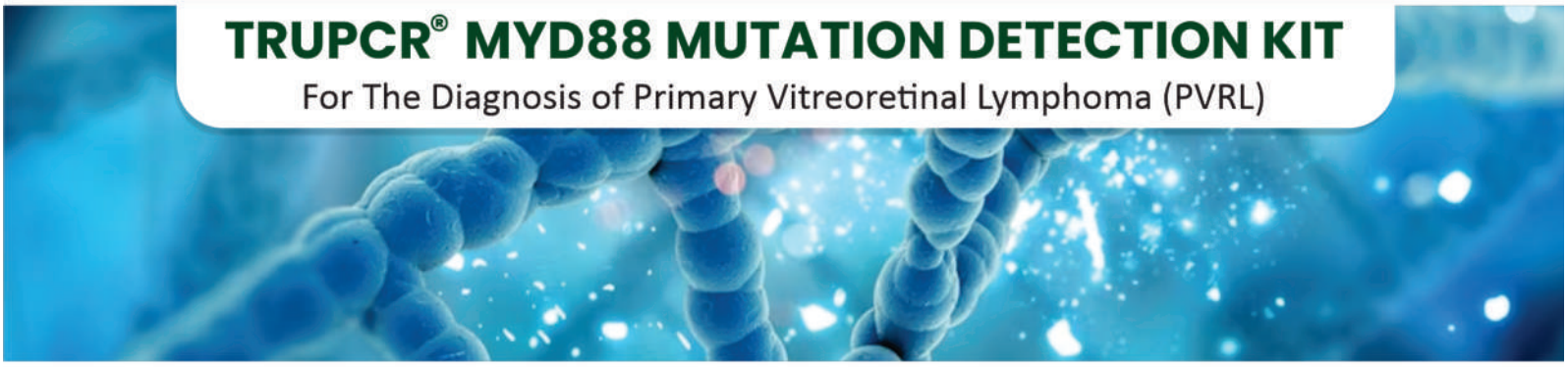
TRUPCR® MYD88 MUTATION DETECTION KIT

For The Diagnosis of Primary Vitreoretinal Lymphoma (PVRL)



NEED

The MyD88 L265P mutation test holds significant importance in the diagnosis and management of ocular lymphomas, particularly in the context of primary vitreoretinal lymphoma (PVRL). MyD88 L265P mutation is frequently observed in PVRL cases and detection of this mutation through molecular testing, such as polymerase chain reaction (PCR) or next-generation sequencing (NGS), serves as a valuable diagnostic tool, aiding in the differentiation of PVRL from other intraocular malignancies or inflammatory conditions. Additionally, the presence of the MyD88 L265P mutation has been linked to a more aggressive disease course and poorer prognosis in ocular lymphomas, thus guiding treatment decisions and prognostic assessments. Overall, the MyD88 L265P mutation test plays a pivotal role in the accurate diagnosis, risk stratification, and personalized management of ocular lymphomas, offering clinicians valuable insights into disease biology and therapeutic strategies.

SOLUTION BY TRUPCR®

The TRUPCR® MYD88 Mutation Detection Kit is an in vitro diagnostic test intended for the qualitative detection of L265P mutation in c.794T>C in myeloid differentiation factor 88 (MYD88) gene from tumor tissue DNA (fresh, frozen or formalin fixed paraffin-embedded tissue)/bone marrow or peripheral blood. Results are intended to aid the clinician in classifying patients among Lymphoplasmacytic lymphoma/Waldenström Macroglobulinemia (LPL/WM), non-Hodgkin lymphoma and ocular lymphomas etc, and carry out treatment planning.

The TRUPCR® MYD88 Mutation Detection Kit is fast, single tube assay based on allele specific amplification and is achieved by ARMS PCR. An internal reference in the assays allows determination of PCR inhibition and helps determine the ΔCt for result interpretation.

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Extraction | Pre PCR | PCR | Post PCR — Complete workflow solution available from Extraction of sample to Post-PCR analysis
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 70 minutes after PCR Start

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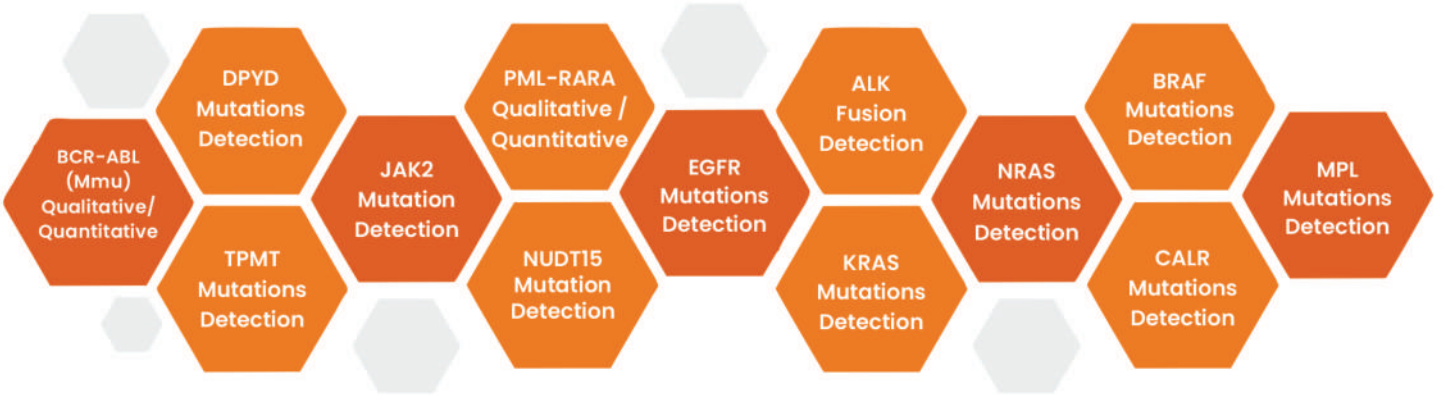
TRUPCR® MYD88 MUTATION DETECTION KIT

For The Diagnosis of Primary Vitreoretinal Lymphoma (PVRL)

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	: Human genomic DNA, extracted from whole blood/bone marrow/FFPE tissue
LIMIT OF DETECTION	: 0.5% Mutant Allele Frequency
COMPATIBLE INSTRUMENTS	: QuantStudio®3, Bio-Rad CFX96 and Qiagen Rotor GeneQ Real-Time PCR

OTHER TRUPCR® ONCOLOGY TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® MYD88 Mutation Detection Kit	3B1427	48
TRUPCR® MYD88 Mutation Detection Kit	3B1428	96

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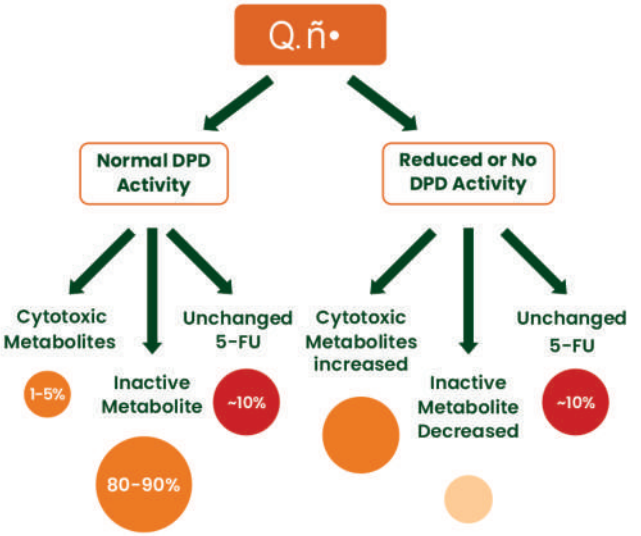
TRUPCR® DPYD MUTATIONS DETECTION KIT

NEED

Fluoropyrimidines such as 5-fluorouridine (5-FU), capecitabine and tegafur are commonly drugs for treating solid tumors. These drugs are metabolized in the liver by enzyme dihydropyrimidine dehydrogenase (DPD) and inactivate more than 80% of these drugs. Certain single point mutations in the gene encoding this enzyme, *DPYD* can result in reduced activity of the enzyme leading to toxicity. Spectrum of severity varies whereas patients with decreased DPD activity may experience diarrhea, nausea, vomiting, may require hospitalization and does reduction, patients with complete lack of DPD activity experience life threatening toxicity, and need to be removed from the therapy.

With 3–5% of the European population having a partial DPD enzyme deficiency and 0.01–0.1% having complete deficiency, *DPYD* testing prior to starting 5-FU therapy is now a standard of care practice in many European countries.

While the data of DPD deficiency in the Indian population is limited, a study on 506 colorectal cancer patients reported it to be 4.7%, very similar to the European population, suggesting that *DPYD* testing in India prior to 5-FU screening could be beneficial.



SOLUTION BY TRUPCR®

The TRUPCR® DPYD Mutations Detection Kit is an *in vitro* diagnostic test intended for the qualitative detection of clinically relevant single nucleotide polymorphisms (SNPs); c.1905+1G>A (rs3918290, also IVS14+1G>A, allele 2A*), c.1679T>G (rs55886062, allele 13*), c.2846A>T (rs67376798) and c.1129–5923C>G (rs75017182, HapB3) in DPD enzyme encoding gene *DPYD* from human genomic DNA, extracted from whole blood/bone marrow.

The TRUPCR® DPYD Mutations Detection Kit is based on allele specific amplification and is achieved by ARMS PCR. The detection of the SNP is achieved in multiplex reactions using fluorescent probes labeled with FAM and HEX with TEXAS RED working as an internal reference. The internal reference is the part of the *DPYD* gene with no known mutation. The TRUPCR® DPYD Mutations Detection Kit comprises of four separate primer probe mixes, each detecting wild type or variable nucleotides

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Extraction | Pre PCR | PCR | Post PCR — Complete workflow solution available from Extraction of sample to Post-PCR analysis
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 70 minutes after PCR Start

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TRUPCR® DPYD MUTATIONS DETECTION KIT

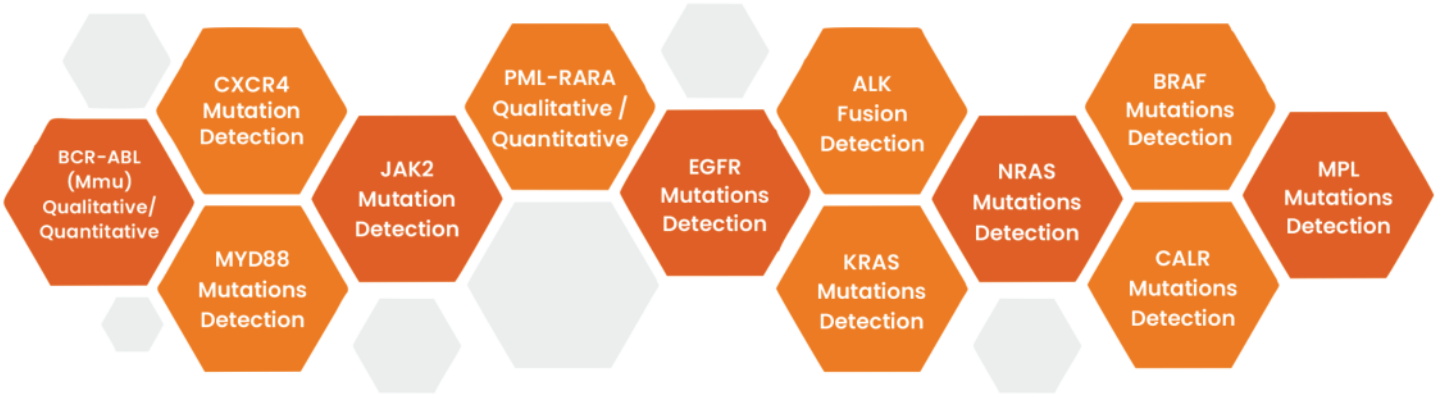
LIST OF DETECTABLE SNPs

Allele	rsID	Nucleotide Change	Protein Change	Enzyme Function
2A*	rs3918290	c.1905+1G>A also IVS14 +1G>A	N/A	No function
13*	rs55886062	c.1679T>G	I560S	No function
N/A	rs67376798	c.2846A>T	D949V	Decreased
HapB3	rs75017182	c.1129–5923C>G	N/A	Decreased

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Human genomic DNA, extracted from whole blood/bone marrow/FFPE tissue
LIMIT OF DETECTION	10 ng of DNA
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series / QuantStudio® series, Bio-Rad CFX96, AriaMx Real-Time PCR, Roche - LightCycler® 480 – II, Line gene K Real-Time PCR

OTHER TRUPCR® ONCOLOGY TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® DPYD Mutations Detection Kit	3B1429	48
TRUPCR® DPYD Mutations Detection Kit	3B1430	96

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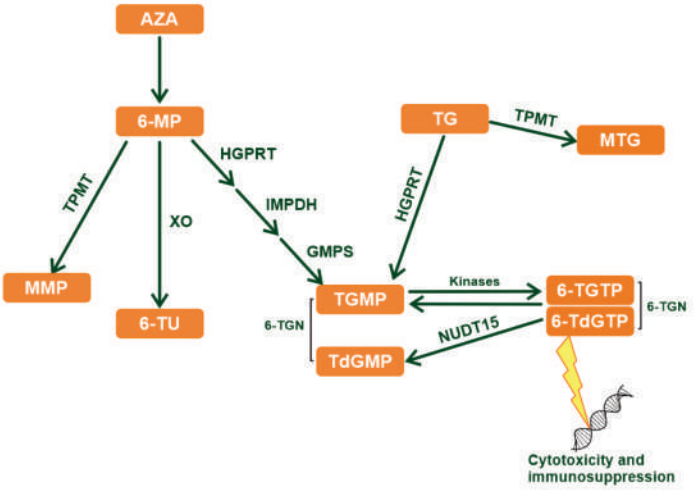
TRUPCR® TPMT MUTATIONS DETECTION KIT

NEED

Thiopurine methyltransferase (TPMT) is an enzyme that plays a crucial role in metabolizing a class of drugs called thiopurines such as 6-mercaptopurine, 6-thioguanine and azathioprine. These are a versatile class of drug and commonly used to suppress the immune system and treat various immune-related conditions and blood disorders, including acute lymphoblastic leukemia, inflammatory bowel disease, autoimmune disorders and as immunosuppressant in transplant patients.



TPMT deficiency can lead to severe side effects when treated with thiopurine drugs. Low TPMT activity can cause myelosuppression (reduced blood cell levels), leading to complications like anemia, infections, and excessive bleeding. Based on TPMT activity levels, individuals may receive standard doses, reduced doses, or alternative drugs.

With about 3-14% of the population including Indians having lower than normal TPMT levels, Food and Drug Administration recommends TPMT testing before starting thiopurine therapy.

SOLUTION BY TRUPCR®

The TRUPCR® TPMT Mutations Detection kit is an *in vitro* diagnostic test intended for the qualitative detection of four clinically relevant single nucleotide polymorphisms (SNPs); c.238G>C, c.460G>A, c.626-1G>A and c.719A>G (NM_000367.2).

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Extraction | Pre PCR | PCR | Post PCR — Complete workflow solution available from Extraction of sample to Post-PCR analysis
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 70 minutes after PCR Start

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TRUPCR® TPMT MUTATIONS DETECTION KIT

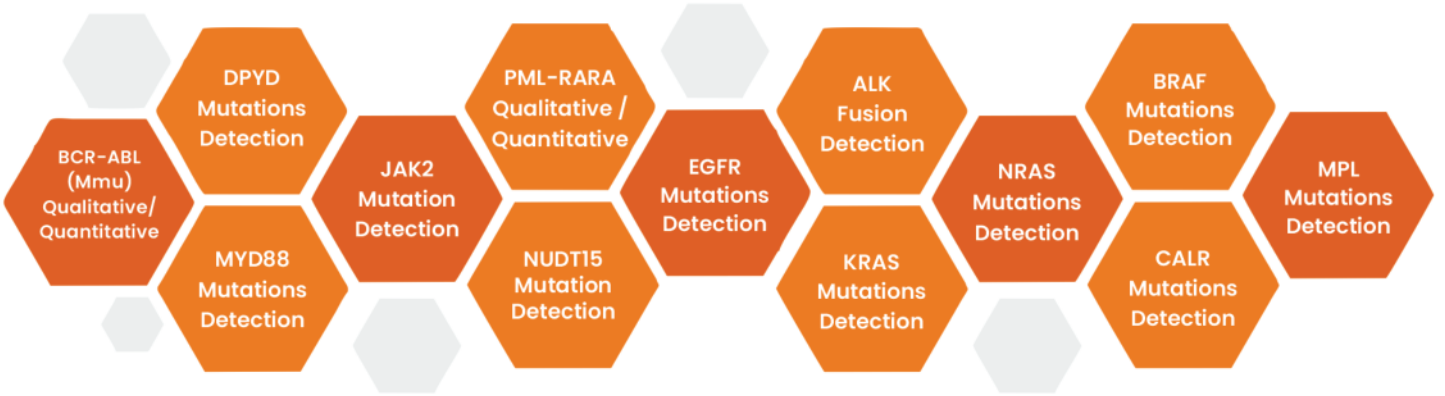
LIST OF DETECTABLE SNPs

Allele	rsID	Nucleotide Change	Protein Change	Enzyme Function
TPMT*2	rs1800462	c.238G>C	A80P	No function
TPMT*3B	rs1800460	c.460G>A	A154T	No function
TPMT*4	rs1800584	c.626-1G>A	N/A	No function
TPMT*3C	rs1142345	c.719A>G	Y240C	No function

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Human genomic DNA, extracted from whole blood/bone marrow/FFPE tissue
LIMIT OF DETECTION	10 ng of DNA
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series / QuantStudio® series, Bio-Rad CFX96, AriaMx Real-Time PCR, Roche - LightCycler® 480 – II, Line gene K Real-Time PCR

OTHER TRUPCR® ONCOLOGY TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® TPMT Mutations Detection Kit	3B1431	48
TRUPCR® TPMT Mutations Detection Kit	3B1432	96

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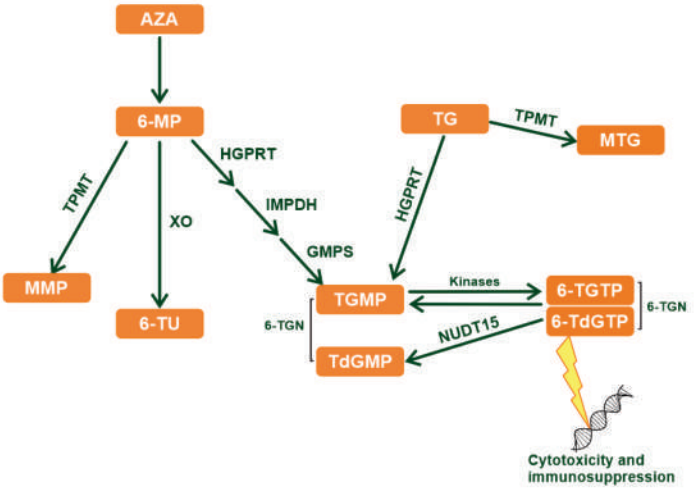
TRUPCR® NUDT15 MUTATION DETECTION KIT

NEED

NUDT15 gene encodes nudix hydrolase 15, an enzyme involved in the metabolism of thiopurine drugs such as azathioprine and 6-mercaptopurine. These medications are commonly used in the treatment of autoimmune disorders, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), and certain types of leukemia. The R139C mutation in the NUDT15 gene has been identified as a genetic variant associated with an increased risk of severe myelosuppression, a side effect of thiopurine therapy. Clinicians may use genetic testing to identify patients carrying the NUDT15 R139C mutation before initiating thiopurine therapy.

With 7-12% of South Asians including Indians carrying NUDT15 deficiency, testing it is of utmost important before starting thiopurine therapy to avoid potential drug toxicity.



SOLUTION BY TRUPCR®

The TRUPCR® NUDT15 Mutation Detection Kit is an in vitro diagnostic test intended for qualitative detection of clinically relevant single nucleotide polymorphism (SNP); c.415C>T (rs116855232) in NUDT15 gene.

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Extraction | Pre PCR | PCR | Post PCR — Complete workflow solution available from Extraction of sample to Post-PCR analysis
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 70 minutes after PCR Start

TRUPCR® NUDT15 MUTATION DETECTION KIT

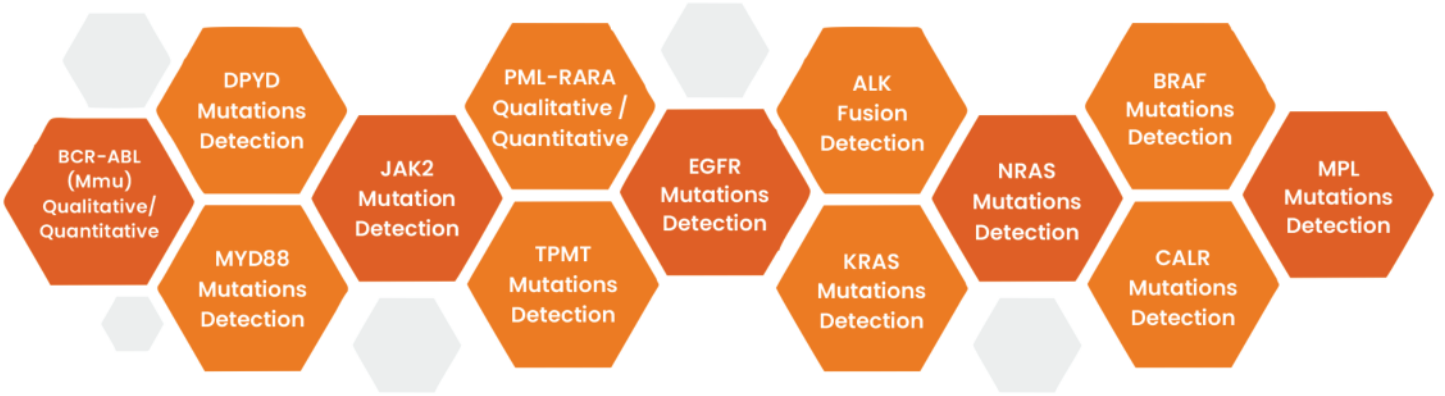
LIST OF DETECTABLE SNPs

Allele	rsID	Nucleotide Change	Protein Change	Enzyme Function
3*	rs116855232	c.415C>T	R139C	No function

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Human genomic DNA, extracted from whole blood/bone marrow/FFPE tissue
LIMIT OF DETECTION	10 ng of DNA
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series / QuantStudio® series, Bio-Rad CFX96, AriaMx Real-Time PCR, Roche - LightCycler® 480 – II, Line gene K Real-Time PCR

OTHER TRUPCR® ONCOLOGY TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® NUDT15 Mutation Detection Kit	3B1447	48
TRUPCR® NUDT15 Mutation Detection Kit	3B1448	96

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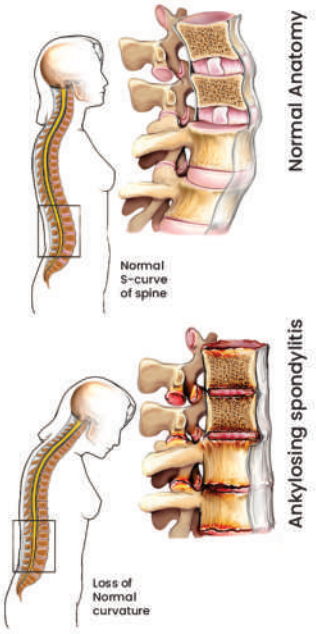
TRUPCR® HLA-B27 KIT

HLA-B27

HLA-B27 is found in about 90% of patients with Ankylosing Spondylitis (AS). Ankylosing spondylitis is a type of arthritis that affects the spine. PCR based detection of HLA-B27 is extremely accurate and considered the "gold standard". Ankylosing spondylitis affects about 0.1% to 0.5% of the adult population. Although it can occur at any age, spondylitis most often strikes men in their teens and 20s. Most, but not all, people with spondylitis carry a gene called HLA-B27. Although people carrying this gene are more likely to develop spondylitis, it is also found in up to 10% of people who have no signs of the condition.



SOLUTION BY TRUPCR®

ALSO AVAILABLE IN LYOPHILIZED FORMAT

TRUPCR® HLA-B27 PCR Kitis a Real-Time PCR based assay for the qualitative detection of HLA-B27 allele in human serum or plasma. It is based on amplification of the allelic gene region by primer and probes specific for HLA-B27. In this kit there are two independent reactions running in parallel in each tube: the first detects HLA-B27 (FAM channel), second detects internal control (HEX channel) which allows excluding unreliable results. It covers one of the highest numbers of the known allelic subtypes in comparison with other available kits in the market.

PRODUCT HIGHLIGHTS

- **Highly accurate compared to other technologies like flowcytometry & microlymphocytotoxicity (MLCT)**
- **Incomplete typing is greatly reduced as PCR directly detects the allele**
- **The test is widely validated over clinical samples across national institutes, NABL and CAP accredited lab**

1 **Extraction**
DNA & RNA Extraction from EDTA Blood/Bone Marrow

2 **Assay Setup**
Automated Assay Setup

3 **PCR**
Platform Agnostic

4 **Post PCR**
Complementary Software Analysis Tools

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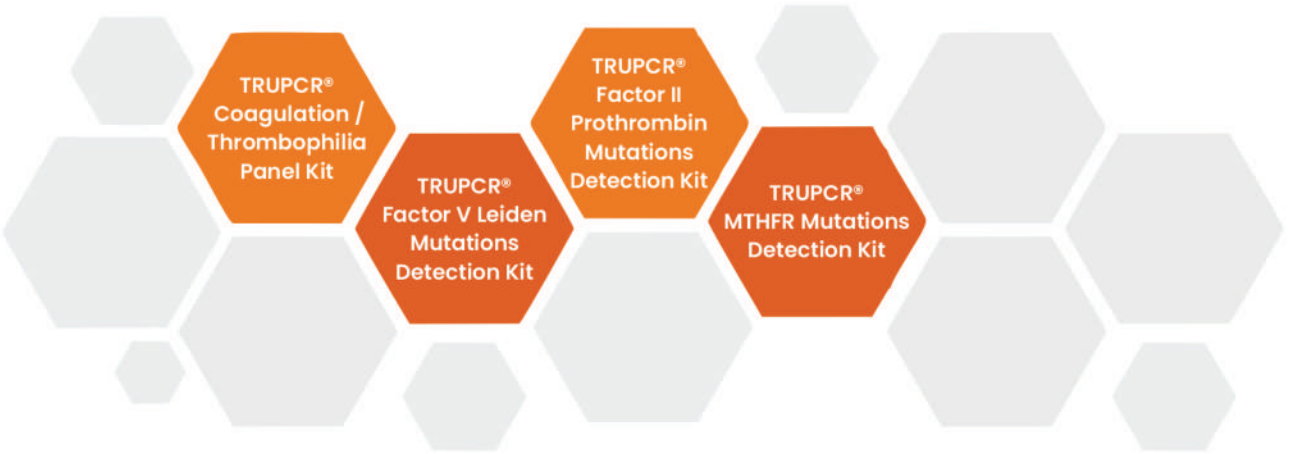
TRUPCR® HLA-B27 KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	Extracted total DNA from Blood of human origin
TEST CONTROL	Endogenous Internal Control
LIMIT OF DETECTION	≥ 10 copies/ ankylosing spondylitis (AS) patients
COMPATIBLE INSTRUMENTS	Applied Biosystems™ 7500 series, QuantStudio® series, Qiagen Rotor-Gene Q, Bio-Rad CFX96, CFX384, Agilent AriaMx, Roche - LightCycler® 480 – II

OTHER TRUPCR® HUMAN GENETIC KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® HLA B27 kit	3B247	48
	3B248	96
TRUPCR® Blood DNA Extraction Kit	3B205	50
	3B206	100

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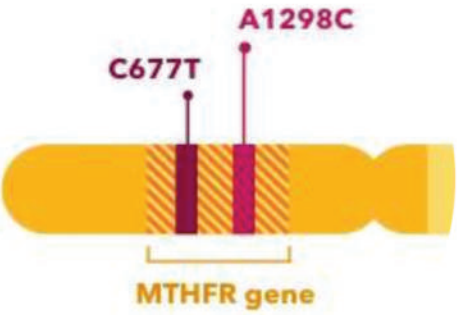
TRUPCR® MTHFR PCR KIT

NEED

The N^5,N^{10}-methylenetetrahydrofolate reductase (MTHFR) is an enzyme that plays an important role in the metabolization of the amino acid methionine. A genetic polymorphism commonly associated with severe MTHFR deficiency is defined by a C to T substitution (cytosine to thymine) at position 677 (C677T) of the MTHFR gene, which leads to the incorporation of amino acid alanine (A) instead of valine (V) at position 222 of the MTHFR protein. The altered MTHFR is known as "Thermolabile MTHFR". TRUPCR Coagulation Panel Kit is an allelic discrimination real-time polymerase chain reaction (PCR) assay for qualitative detection of the mutation against a background of wild-type genomic DNA. In an allelic discrimination, two different probes specific for each allele are included in the PCR assay. Each probe is labeled with a different fluorescent dye (such as FAM or HEX/VIC) at its 5' end and contains a non fluorescent quencher at the 3' end. During qPCR amplification of the target DNA the probes will compete for binding across the variant region.



TRUPCR® MTHFR Kit is an allelic discrimination real-time polymerase chain reaction (PCR) assay for qualitative detection of the mutation against a background of wild-type genomic DNA. In an allelic discrimination, two different probes specific for each allele are included in the PCR assay. Each probe is labeled with a different fluorescent dye (such as FAM or HEX/VIC) at its 5' end and contains a non fluorescent quencher at the 3' end. During qPCR amplification of the target DNA the probes will compete for binding across the variant region.

1. Endogenous Internal Control incorporated within the kit to ensure reliable results
2. Extraction | Pre PCR | PCR | Post PCR — Complete workflow solution available from Extraction of sample to Post-PCR analysis
3. Platform agnostic as compatible with various platforms
4. Rapid and reliable results within 70 minutes after PCR Start

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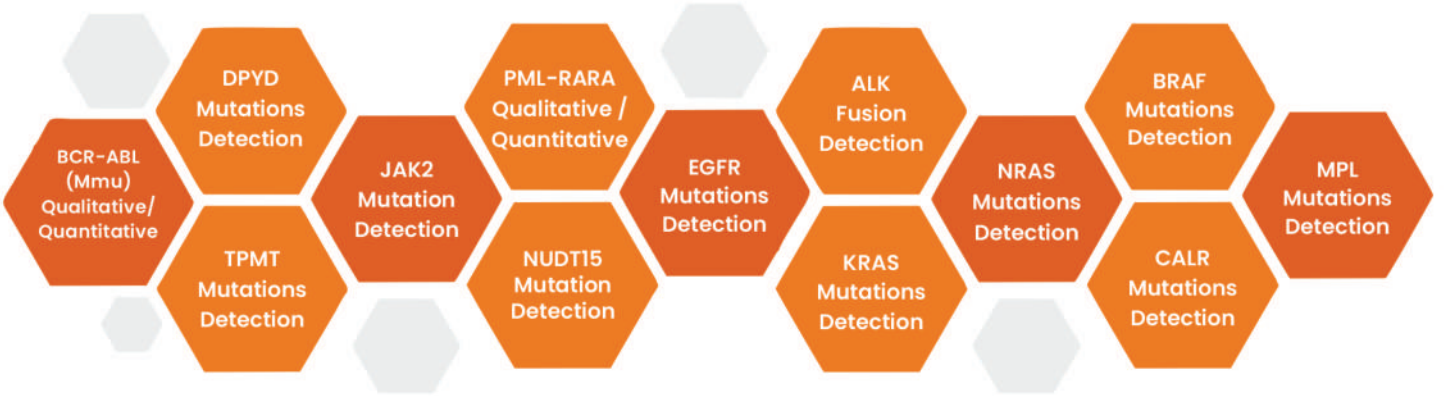
TRUPCR® MTHFR PCR KIT

TECHNICAL SPECIFICATIONS

SAMPLE TYPE	: Human genomic DNA, extracted from whole blood/bone marrow/FFPE tissue
LIMIT OF DETECTION	: Higher sensitivity (2% Mutant allele in background of 98% WT allele) and specificity
COMPATIBLE INSTRUMENTS	: Applied Biosystems™ 7500 series / QuantStudio® series, Bio-Rad CFX96, AriaMx Real-Time PCR, Roche - LightCycler® 480 – II, Line gene K Real-Time PCR

OTHER TRUPCR® ONCOLOGY TESTING KITS



ORDERING INFORMATION

Product	Cat. No.	Pack Size
TRUPCR® MTHFR Mutation (C677T) Kit	3B1331	48
TRUPCR® MTHFR Mutation (C677T) Kit	3B1332	96

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