



Multiplex Real-Time PCR Kit for Detection of 14 Meningitis/Encephalitis Pathogens

Trace the Pathogen. Protect the Nervous System

► Background



Central nervous system (CNS) infections are caused by pathogens such as viruses, bacteria, fungi, and parasites invading the CNS parenchyma, meninges, or blood vessels. They include encephalitis, meningitis, and myelitis, and are marked by acute onset, rapid progression, and high mortality. As a major global health burden, pathogen identification is central to diagnosis and treatment.

2.51
Million

New CNS infections
worldwide (2019)^[2-3]

23.6
Million

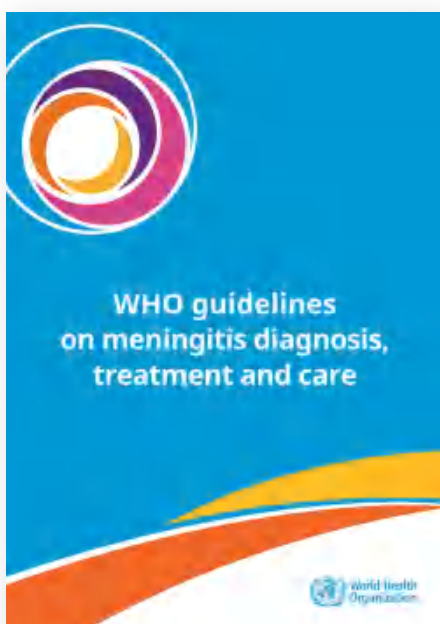
CNS deaths worldwide
(2019)^[2-3]

► Challenges in Pathogen Diagnosis of CNS Infections



More than 50% of CNS infection cases ultimately fail to obtain a definitive pathogen diagnosis^[5]. Among patients presenting with encephalitis, 50–60% remain without an identified etiology^[6]. In a population-based, multicenter prospective study on encephalitis, the pathogen detection positivity rate was only 42%^[7].

► Guidelines recommend using multiplex PCR for the detection of CNS infection pathogens



Strong recommendations: In individuals with suspected acute meningitis, PCR-based molecular tests for relevant pathogens should be performed on cerebrospinal fluid samples. Results of PCR-based tests on CSF should be interpreted in the context of clinical presentation and additional laboratory findings.

— WHO guidelines on meningitis diagnosis, treatment and care

For children suspected of having community-acquired bacterial meningitis (CABM), it is recommended to perform multiplex PCR in parallel with cerebrospinal fluid (CSF) Gram staining and bacterial culture.

— Clinical Practice Guidelines for the Diagnosis and Treatment of Pediatric Community-Acquired Bacterial Meningitis (2025)

For patients with encephalitis or meningitis of unknown etiology, singleplex PCR or multiplex PCR may be considered as the preferred initial diagnostic methods.

— Expert Consensus on the Application of Diagnostic Technologies for Viral Encephalitis and Meningitis Pathogens

► One Test, 14 Common CNS Pathogens



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Covering 14 pathogens

Virus (7)

Enterovirus, Cytomegalovirus (CMV), Herpes Simplex Virus Type I (HSV-1), Herpes Simplex Virus Type II (HSV-2), Varicella-Zoster Virus (VZV), Parechovirus, Human herpesvirus 6

Bacteria (6)

Haemophilus influenzae, Streptococcus pneumoniae, Streptococcus agalactiae, Neisseria meningitidis, Escherichia coli K1, Staphylococcus aureus

Fungi (1)

Cryptococcus neoformans sensu lato

► Product Features



01

Comprehensive

Covers common encephalitis and meningitis pathogens. Preliminary results in 2.5 hours to aid CNS pathogen diagnosis.

02

Guideline-recommended

WHO and multiple expert consensus guidelines, as well as CDCs, recommend using multiplex nucleic acid testing as a basis for diagnosing encephalitis and meningitis.

03

Superior

Detects as low as 500 copies/mL and identifies pathogens missed by conventional culture.

04

Convenient

Runs in any PCR lab, easy to operate, no extra equipment needed, cost-effective, and policy-compliant.

► Clinical Value



Enhances pathogen detection for precise diagnosis and timely treatment.



Supports diagnosis for earlier confirmation

Faster diagnosis, fewer tests, shorter hospitalization, reduced medication.



Reduces healthcare costs

Quickly screens common pathogens, speeds up diagnosis.



Rule out common pathogen infections

Target Clinical Settings and Patient Segments

- Departments: Emergency, Neurology, Pediatrics, Geriatrics, and Intensive Care Units (ICU)
- Patients: Suspected CNS infection cases with acute fever, severe headache, neck stiffness, nausea, altered consciousness, or seizures.

▶ Product Specifications



Multiplex Real-Time PCR Kit for Detection of 14 Meningitis Pathogens

Sample Type:	Cerebrospinal fluid (CSF).
Detection Method:	Multiplex real-time PCR and Melting Curve Analysis.
Packing Size:	50 tests/box.
Compatible Instrument:	LightCycler 480 (Roche).
LoD:	100–500 copies/mL, depending on the pathogen. See IFU for details.
Storage Conditions and Shelf Life:	Store at -15°C or below. Shelf life: 18 months.

Reference

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