Recombinant Echovirus Antigen

Cat. No. ENT-209 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Echovirus antigen, recombinant has been manufactured in E. coli for use in the detection of IgG, IgM and IgA antibodies against Echovirus.
Background	An ECHO (enteric cytopathic human orphan) virus is an RNA virus that belongs to the species Enterovirus B, genus Enterovirus of the Picornaviridae family. They are distributed worldwide and make up the largest Enterovirus subgroup, consisting of 29 serotypes. Echoviruses are found in the gastrointestinal tract and exposure to the virus causes other opportunistic infections and diseases. They are common human pathogens that cause a range of illnesses, from minor febrile illness such as common cold to severe, potentially fatal conditions (eg, aseptic meningitis, encephalitis, paralysis, myocarditis). The human pathogenic strains include Echoviruses 1–7, 9, 11–27 and 29–33. Echovirus is highly infectious, and its primary target is children making it one of the leading causes of acute febrile illness in infants and young children, and is the most common cause of aseptic meningitis and neonatal sepsis-like disease (Lee et al., 2017; Suresh et al., 2019). Echovirus particles are 24–30 nm and have a naked protein capsid, which makes up 75% of the virus particle. The capsid encloses a dense central core of single-stranded RNA of approximately 7.5 kb. The genome contains an RNA replicase, viral-coded proteins, and a single polyprotein that is responsible for the formation of structural proteins and other proteins required for cellular replication. The structural proteins determine host range and play a very important role in delivering the RNA genome into the cytoplasm of new host cells. Some viral replication of an echovirus occurs in the nasopharynx after infection and then spreads to regional lymph nodes but most viral particles are swallowed and they reach the lower gut tract, where the virus is

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	presumed to bind to specific receptors. The virus then spreads to the lower intestinal tract, prior to spreading to different secondary sites in the body such as the central nervous system, liver, spleen, bone marrow, heart and lungs. Additional replication of the virus will then occur, causing symptoms 4 to 6 days after infection. Transmission of Echoviruses is predominantantly person-to-person either directly or indirectly by the the fecal-oral route (Harvala and Simmonds, 2009). No specific treatment for echovirus infection is currently available.
Formulation	39 mM Tris/HCl pH 8.0, 150 mM NaCl, 10 % glycerol.
Applications	For immunoassay development or other applications.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	Echovirus

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