ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

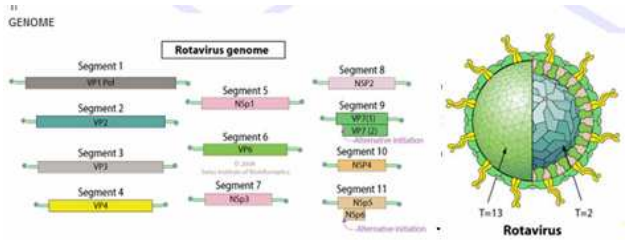
Product Specification Sheet

Epizootic diarrhea of infant mice (EDIM)/rotavirus Capsid Protein 6 Antibodies and Controls

☐ **Cat #** EDIM11-MNC	**Mouse** Anti-EDIM/rotavirus Capsid Protein 6 (VP6) **negative** control serum	**SIZE**: 1 ml
☐ **Cat #** EDIM11-MPC	**Mouse** Anti-EDIM/rotavirus Capsid Protein 6 (VP6) **positive** control serum	**SIZE**: 1 ml
☐ **Cat #** EDIM12-MNC	**Rat** Anti-EDIM/rotavirus Capsid Protein 6 (VP6) **negative** control serum	**SIZE**: 1 ml
☐ **Cat #** EDIM12-MPC	**Rat** Anti-EDIM/rotavirus Capsid Protein 6 (VP6) **positive** control serum	**SIZE**: 1 ml

Animals, just like humans, are susceptible to various bacterial and viral infections. Animals are used widely in biomedical research. Laboratory animal infections may compromise the health of the animals and ultimately the research data derived from them. Microbial infections alter not only the animal behavior but also the biological responses. Apart from the use of whole animals for experimentations, numerous animal cell lines and proteins are also derived from animals and used in biomedical research. Animals or animal-derived products are transported from one part of the world to another in a matter of days. So there is great potential for the diseases to spread very quickly. Many infections are asymptomatic and without any overt clinical symptoms. Detection of microbial infections has relied largely on serological screening and presence of microbial antigens or antibodies.

Diarrhea in young laboratory mice is often caused by mouse rotavirus, also called **epizootic diarrhea of infant mice (EDIM**). This virus is highly contagious and is transmitted via contaminated bedding, airborne dust, and through contact with infected mice. There is no evidence of transplacental infection. These animals present with watery, mustard-colored stools, lethargy, and distended abdomens. If the impacted fecal material is not removed spontaneously or deliberately, the animals will die. Rotavirus infections are the primary causes of several gastroenteritis in young children and are the cause of nearly one million deaths worldwide each year. Diagnosis is usually based on serology, via ELISA or IFA or both.



EDIM or rotavirus is a genus of dsRNA virus in the family Reoviridae. There are five species of this virus (A-E). Rotavirus A, the most common, causes more than 90% of infections in humans. Rotaviruses infect the young of many species of animals and they are a major cause of diarrhoea in wild and reared animals worldwide. As a pathogen of livestock, notably in young calves and piglets, rotaviruses cause economic loss to farmers because of costs of treatment associated with high morbidity and mortality rates. The genome of rotavirus consists of 11 unique double helix molecules of RNA which are 18.5kb in total. Each helix, or segment, is a gene, numbered 1 to 11 by decreasing size. Each gene codes for one protein, except genes 9, which codes for two. The RNA is surrounded by a three-layered icosahedral protein capsid. There are six viral structural capsid proteins (VP1-4, VP6-7) that form the virus particle (virion). In addition to the VPs, there are six nonstructural proteins (NSPs), that are only produced in cells infected by rotavirus (NSP1-6). VP6 forms the bulk of the capsid. It is highly antigenic and can be used to identify rotavirus infections. VP6 protein of the murine rotavirus strain EDIM are able to elicit protection against rotavirus shedding in the adult mouse model. VP6-based human vaccines are in active clinical trials.

Source of Antigen and Antibodies

Pooled Rat serum (Sprague-Dawley, adult, mixed sex) or mouse (Balb/c, adult, mixed sex) containing antibodies to LCMV-NP as tested by ADI ELISA (#AE-30200-1). The positive serum tested positive with A450 values of >2.0. The negative serum produced A450 values of >0.3. Control sera are provide in PBS, pH 7.5 containing 0.1% proclin-300 (preservative) in liquid or lyophilized in the same buffer. Store liquid at 4oC for up to 3 months at 4oC or frozen in suitable size aliquots. Store powder at -20oC in. Reconstitute the powder in 1 ml water.

Recommended as positive and negative controls for anti-LCMV NP protein IgG by ELISA. The controls may or may not be antibody positive against the whole LCMV or other LCMV.

Use undiluted in 50-100 ul per well or dilute as necessary depending upon the sensitivity of the detection.
sample buffer (reduced). Load 10 ul/lane of # EDIM14-**C** for good visibility with antibody Cat # EDIM14-S. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the # EDIM14-**C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

References: Baker DO (1998) Clin. Microbiol. Rev. 11, 231-266; Parker JC (1982) *The Mouse in Biomedical Research Diseases."* Academic Press, Inc. pp. 160-167; Choci AHC (2000) J. Virol. 74, 11574-11580; Matthijnssens J (2008) J. Virol. 82, 3204-3219;.

*This product is for In vitro research use only.

Related material available from ADI

Rabbit Anti-EDIm-VP6 antibody ELISA kit

Recombinant EDIM-VP6 protein and antibodies

Mouse, human, bovine, and other species rotavirus antibody ELISA kits

EDIM11-MNC 121121A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A;

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com