ALPHA DIAGNOSTIC INTERNATIONAL

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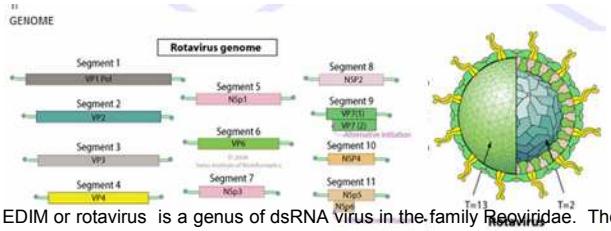
Product Specification Sheet

Epizootic diarrhea of infant mice (EDIM)/rotavirus Capsid Protein 6 (EDIM-VP6)

☐ **Cat #** EDIM15-R-10 Recombinant EDIM/rotavirus Capsid Protein 6 (VP6) protein **SIZE**: 10 ug

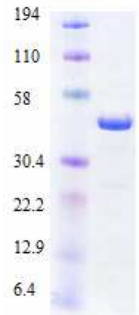
Animals, just like humans, are susceptible to various bacterial and viral infections. Animals are used widely in biomedical research. Laboratory animal infections may compromise the health of the animals and ultimately the research data derived from them. Microbial infections alter not only the animal 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



Murine EDIM-VP6 was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~46.5 KDa). Purified protein is supplied in 50 mM Tris, pH 8, 0.25M NaCl, 5mM beta-mercaptoethanol,, 0.5mM ETDA, 0.25M imidazole, and 8M Urea (or see lot sp. conc on the vial).

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting: load 100-200 ng/well.

ELISA (50-100 ng antigen/well).

Specificity & Cross-reactivity

Murine EDIM-VP6 protein is highly conserved in bovine, human Rotavirus A, simian, Feline, caprine, and porcine rotaviruses VP6 (96%). Anti-murine EDIM-VP6 are expected to crossreact with VP6 from various species. However, antibody crossreactivity has not been established. Recombinant purified murine EDIM-VP6 protein is available for control studies.

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;.

Related materials available from ADI *This product is for research use only.*

EDIM14-C	Recombinant (E. coli, his-tag, ~46 Kda) Epizootic diarrhea of infant mice (EDIM)/rotavirus Capsid Protein 6 (VP6) control for Western blot
EDIM14-S	Rabbit Anti-Epizootic diarrhea of infant mice (EDIM)/rotavirus Capsid Protein 6 (VP6) antiserum
EDIM15-M	RecombiVirus Mouse monoclonal Anti-Epizootic diarrhea of infant mice (EDIM)/rotavirus Capsid Protein 6 (VP6) IgG, aff pure
EDIM16-M	RecombiVirus Mouse monoclonal Anti-Nebraska calf diarrhea virus Protein 6 ((p43/VP6) IgG, aff pure
EDIM17-M	RecombiVirus Mouse monoclonal Anti-Rotavirus (all serotypes) (p43/VP6) IgG, aff pure
EDIM18-S	Anti-Nebraska calf diarrhea virus (NCDV) antiserum
AE-300420-1	RecombiVirus Rabbit EDIM/rotavirus VP6 antibody IgG ELISA Kit, 96 tests
AE-300430-1	RecombiVirus Human EDIM/rotavirus VP6 antibody IgG ELISA Kit, 96 tests
AE-300431-1	RecombiVirus Human EDIM/rotavirus VP6 antibody IgM ELISA Kit, 96 tests
AE-300432-1	RecombiVirus Human EDIM/rotavirus VP6 antibody IgA ELISA Kit, 96 tests
AE-300440-1	RecombiVirus Monkey EDIM/rotavirus VP6 antibody IgG ELISA Kit, 96 tests
AE-300450-1	RecombiVirus Bovine EDIM/rotavirus VP6 antibody IgG ELISA Kit, 96 tests
AE-300451-1	RecombiVirus Bovine EDIM/rotavirus VP6 antibody IgM ELISA Kit, 96 tests
AE-300452-1	RecombiVirus Bovine EDIM/rotavirus VP6 antibody IgA ELISA Kit, 96 tests
AE-300460-1	RecombiVirus Sheep EDIM/rotavirus VP6 antibody IgG ELISA Kit, 96 tests

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