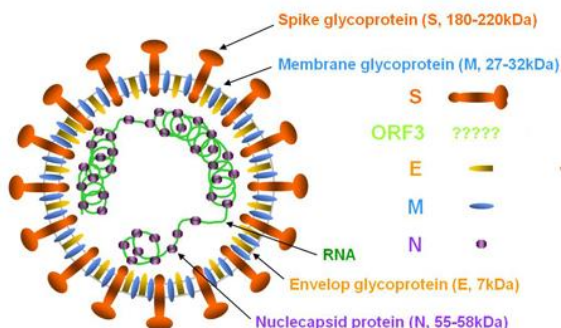


Product Specification Sheet

| | | |
|----------------------------------------|--------------------------------------------------------------------------------------------------|-------------|
| <input type="checkbox"/> Cat# PEDV12-M | Mouse Monoclonal Anti-Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) IgG, unlabeled | SIZE:100 ul |
| <input type="checkbox"/> Cat# PEDV12-F | Mouse Monoclonal Anti-Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) IgG-FITC Conjugate | SIZE:0.5 ml |

PEDV is an enveloped RNA virus belonging to Group 1a, genus Coronavirus, family Coronaviridae, within the order Nidovirales, is the causative agent of porcine epidemic diarrhea (PED), an enteric disease characterized by vomiting, watery diarrhea, and dehydration in swine. This disease was first reported in feeder and grower pigs in the UK in 1971, after which the virus was identified. The disease has subsequently been reported in a number of European countries and more recently in China, Korea, Japan, Thailand and Vietnam.



The viral genome is a single-stranded positive-sense RNA of approximately 28 kb in size, containing six genes: the **replicase (Rep)**, **spike (S)**, **ORF3**, **envelope (E)**, **membrane (M)**, and **nucleoprotein (N)** genes, arranged in the order 5'-Rep-S-ORF3-E-M-N-3. S (180–220 kDa), M (27–32 kDa), and N (55–58 kDa) are the major structural proteins. The S protein plays a pivotal role in determining viral-cellular fusion activity and in inducing an immune response in the natural host. The M protein plays an important role in the virus-assembly process, and induces antibodies that neutralize virus in the presence of complement. The N protein of coronaviruses forms a helical ribonucleoprotein with the virus genomic RNA and is the predominant antigen produced in coronavirus-infected cells, thus making it a major viral target. Unlike the structural proteins, little is known about the functions of the accessory proteins. The recently-identified ORF3 gene has been demonstrated to be a potentially important determinant of virulence in this virus.

PEDV cannot be transmitted to humans, nor contaminate the human food. PEDV has a substantial economic burden given that it is highly infectious, resulting in significant morbidity and mortality in piglets. Consumers are likely to feel the effects of the viral disease in the form of higher prices for pork products. PED causes not only the death of neonatal piglets, but also weight loss in fattening pigs due to PEDV-induced diarrhea. Therefore, an effective vaccine strategy is essential in preventing PEDV infection.

Source of Antigen and Antibodies

| | |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|
| Antigen | Recombinant PEDV Nucleocapsid protein (US origin) |
| Ab Host/type | Mouse, monoclonal, IgG1 |
| Ab Format | Purified IgG (cat #PEDV12-M) supplied in PBS, pH 7.4, 0.1% azide |
| -ve control | Cat# 20102-101-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control |
| Secondary antibodies | Goat Anti-mouse IgG-HRP conjugate Cat# 40320-200 (AP, biotin, FITC conjugates also available) |

Cat# PEDV12-F, FITC-conjugate

Purified antibody was coupled to FITC at F/P ratio ~5. The antibody is supplied in PBS, pH 7.4, 1% BSA, and 0.05% azide. Store at -20°C in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:20-1:500 for immunofluorescence.

Absorption Wavelength: 495 nm
Emission Wavelength: 528 nm

Form & Storage of Antibodies/Peptide Control

Ascites
 100 ul solution lyophilized powder
 Buffer: PBS+0.05% azide
Reconstitute powder 100 ul of PBS.

Storage
Short-term: unopened, undiluted vials for less than a week at 4°C.
Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.
Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting: An initial dilution of 1:500-2K is recommended for Western. Purified PEDV is ~50kda. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.
ELISA (1:10-50K; using 50-100 ng antigen/well).

Histochemistry & Immunofluorescence: 1:10 -1:50 for IFA

Specificity & Cross-reactivity: PEDV NP protein

References: Shuai J (2007) Virus Genes 35, 619-627; Seo HW (2014) Vet. J. 200, 65-70

*This product is for In vitro research use only.

Related material available from ADI

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Catalog# | Prod Description |
| PEDV11-C | Purified recombinant Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) WB positive control |
| PEDV11-S | Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) antiserum |
| PEDV12-F | Mouse Monoclonal Anti-Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) IgG-FITC Conjugate |
| PEDV12-M | Mouse Monoclonal Anti-Porcine epidemic diarrhea virus Nucleoprotein (PEDV-NP) IgG, unlabeled |
| PEDV15-R-10 | Recombinant (E.coli, his tag) Porcine epidemic diarrhea virus nucleoprotein (PEDV-NP) (>95%) |
| RV-400900-1 | Recombinant Porcine/Swine/Pig Anti-Porcine Epidemic Diarrhea Virus Nucleoprotein (PEDV-NP) IgG ELISA kit, |
| PEDV12-M-Porcine-Epidemic-Diarrhea-NP | 160503SV |