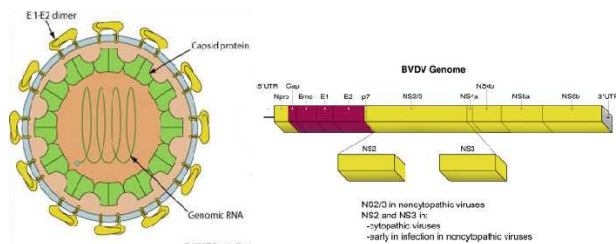


**Bovine Viral Diarrhea Virus2 E2 Protein Antibody controls**

- |   |            |
|---|------------|
| <input type="checkbox"/> RV-500100-03N Bovine Viral Diarrhea Virus 2 E2 (BVDV2-E2) IgG Negative control Serum | Size: 1 ml |
| <input type="checkbox"/> RV-500100-04P Bovine Viral Diarrhea Virus 2 E2 (BVDV2-E2) IgG Positive control Serum | Size: 1 ml |

The **Bovine viral diarrhea virus (BVDV)** is a single stranded RNA virus with positive polarity belonging to the genus Pestivirus of the Flaviviridae family of viruses. BVDV is transmitted by persistently infected (PI) animals. PI animals can spread BVDV through saliva, nasal secretions, feces, urine, tears, milk, semen, vaginal discharges, placenta and birth fluids. This virus is responsible for causing Bovine virus diarrhea (BVD) and mucosal disease (MD). The BVDV virus targets the bovine fetus or embryo resulting in embryonal/foetal death, tetragonosis. BVD is responsible for diarrhea, decreased milk production, reproductive disorders, increased occurrence of other diseases and death. This according to the USDA can cause losses upto \$50 \$100 per cow to the beef and dairy industry.



Genetically BVDV has been distinguished into two recognized species: BVDV-1 and BVDV-2. 17 subtypes for BVDV-1 and three for BVDV-2 have been identified till date. The core region of the BVDV virion is composed of the genomic RNA coated with capsid. Surrounding the core is a lipid bilayer envelope that has virus-encoded glycoproteins inserted into it. The structural protein - E2 is an integral membrane protein necessary for the infectivity of the virus particle. This glycoprotein contains the major antigenic determinants and the major humoral immune response is targeted towards the E2 protein with the major antigenic epitopes being located at the N-terminal of the protein. The length of the RNA sequence for the E2 protein is 407 aa and the mass of the protein itself is approximately 53 kDa.

ELISA is a valuable tool for BVDV diagnosis which can measure the rapidly rising antibody titers (~2 weeks after infection). Cows and calves infected with BVDV have a compromised immune system and show low milk production and reproductive disorders which can incur heavy losses to the beef and dairy industry. Bovine viral diarrhea has been observed to be highly prevalent (36-88%) in major parts of the world leading to high economic losses.

**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.

**Source of Antibodies**

Bovine serum containing antibodies to Bovine Viral Diarrhea Virus 2 E2 protein as tested by Bovine Viral Diarrhea Virus 2 E2 protein IgG ELISA kit #RV500100-1. Control sera are provided in a stabilizing buffer and 0.05% azide. Store liquid at 4oC for up to 3 months or frozen in suitable size aliquots.

Recommended as positive and negative controls for Bovine Viral Diarrhea Virus 2 E2 protein IgG by ELISA (#RV500100-1). **Use undiluted in 50-100 ul per well** or dilute as necessary depending upon the sensitivity of the detection. The controls may register different values if tested in a kit from a different manufacturer.

**General References:** Ridpath JF, Neill JD, Vilcek S, Dubovi EJ, Carman S (2006) Vet. Microbiol. 114,196-204.

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog# Prod Description

- |             |  |
|-------------|--|
| BVDE11-C    | Recombinant BVDV1 Envelope glycoprotein 2 (BVDV1 E2) Protein control for western blot                      |
| BVDE11-S    | Anti-Bovine Viral Diarrhea Virus 1 Envelope glycoprotein 2 (BVDV1-E2) antiserum                            |
| BVDE15-R-10 | Recombinant (E.coli) Bovine Viral Diarrhea Virus 1 Envelope glycoprotein 2 (BVDV1-E2, his tag) purified    |
| BVDE25-R-10 | Recombinant (E.coli) Purified Bovine Viral Diarrhea Virus 2 E2 protein (BVDV2-E2, his tag) purified        |
| BVDE31-C    | Recombinant (E.coli) Purified Bovine Viral Diarrhea Virus 3 E2 (BVDV3 E2) Protein control for western blot |
| BVDE31-S    | Anti-Bovine Viral Diarrhea Virus 3 (BVDV3) E2 Protein antiserum  |
| BVDE31-S    | Anti-Bovine Viral Diarrhea Virus 3 E2 (BVDV3-E2)protein antiserum  |
| BVDE35-R-10 | Recombinant (E.coli) Purified Bovine Viral Diarrhea Virus 3 E2 (BVDV3 E2) Protein (>95%)                   |
| BVDR12-C    | Recombinant Bovine Viral Diarrhea Virus 1 (BVDV1) Erns Protein control for western blot                    |
| BVDR12-S    | Anti-Bovine Viral Diarrhea Virus 1 Erns (BVDV1-Erns) Protein antiserum                                     |
| BVDR16-R-10 | Recombinant (E.coli) Purified Bovine Viral Diarrhea Virus 1 Erns Protein (BVDV1-Erns, his tag) purified    |

RV-500100-03N-BVDV2-E2 IgG-Serum 151117C