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Certificate of Analysis

Monoclonal Antibody

Cell Line: 157
Specificity: Binds to the E2 (gp53) protein of type 1 Bovine Viral Diarrhea Virus (BVDV1). This monoclonal antibody binds specifically to BVDV1, and not BVDV2.

Note: BVDV1 genotypes usually produce only mild diarrhea in immunocompetent cattle, while BVDV2 genotypes can produce thrombocytopenia, hemorrhages, and acute fatal disease. The viruses of either genotype may exist as one of two biotypes, cytopathic or noncytopathic.

Isotype: IgG_{2a}
Lot No.: 03/09/01

Known Applications: Can be used as a typing reagent for BVDV1 using indirect immunofluorescence or indirect immunoperoxidase reactions. This monoclonal antibody has also been used in virus neutralization assays.

References:

- Deregt, D., *et al.* Mapping of a type 1-specific and a type-common epitope on the E2 (gp53) protein of bovine viral diarrhea virus with neutralization escape mutants. *Virus Research* 53: 81-90 (Jan. 1998).
- Deregt, D., and S. Prins. A monoclonal antibody-based immunoperoxidase layer (microisolation) assay for detection of type 1 and type 2 bovine viral diarrhea viruses. *Can. J. Vet. Res.* 62:152-155 (April 1998).
- Deregt, D., *et al.* Monoclonal antibodies to the E2 protein of a new genotype (type 2) of bovine viral diarrhea virus define three antigenic domains involved in neutralization. *Virus Res.* 57:171-181 (Oct. 1998).

Description and Handling: This monoclonal antibody is produced as mouse ascites fluid, clarified by centrifugation, and filtered through a 0.2 µM filter. The concentration is 1.0 mg/ml in phosphate-buffered saline, preserved with sodium azide.

Storage: When the vial is stored at 2-8°C, it should be stable for one year.

Quality Control Method (VMRD QC640): Indirect FA using BVDV Type 1 (Modderman) slide (VMRD catalog no. 210-88-10-BVD), Type 2 (TN 131) slide, and sheep anti-mouse IgG (whole molecule).

Result: 3-4+ positive fluorescence at 1:100 dilution in FA Conjugate Diluting Buffer (VMRD catalog no. 210-91-CB) on BVDV Type 1; negative on BVDV Type 2 at 1:10 dilution.

Other Reactions or Comments: Trace background.

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