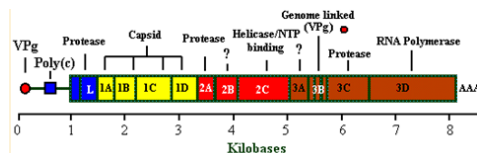


Product Specification Sheet

Recombinant Foot and mouth disease virus serotype O, 3AB Antigen Coated Plate

□ **Cat # RV-400771-CP5** Recombivirus Foot and mouth disease virus 3AB antigen coated plates for ELISA (5x96 tests) **SIZE:** 1 pk

FMD disease is a viral disease that affects cloven-hoofed animals, including domestic and wild bovids. The causative agent is FMDV, a picornavirus. The virus causes a high fever followed by blisters inside the mouth and on the feet that may rupture and cause lameness. FMD has severe implications for animal farming, since it is highly infectious and can be spread by infected animals. Its containment demands considerable efforts in vaccination, strict animal monitoring (diagnosis), trade restrictions, quarantines, and occasionally the killing of animals. FMD susceptible animals include cattle, water buffalo, sheep, goats, pigs, antelope, deer, and bison. the disease remains enzootic in many regions of the world, posing a serious problem for commercial trade with FMD-free countries. Endemic areas include parts of Asia, Africa, Middle east and South America. Effective vaccines and stringent control measures have enabled FMD eradication in most developed countries. Of the **seven FMD serotypes** of this virus, A, C, O, Asia 1 and SAT3 appear to be distinct lineages; SAT 1 and SAT 2 are unresolved clades. **FMD serotypes are not uniformly distributed in the regions of the world where the disease still occurs.**



The FMDV genome is ~8.2Kb. It is a small non enveloped virus with a pseudo T=3 icosahedral

capsid made up of 60 copies of four structural (SP) proteins. P1 of the genome encodes for the capsid proteins (VP1-4) while P2 encodes non-structural proteins (NSP2A/2B/2C) and P3 region (NSP3A/Vpg/3Cpro, and 3D pol). VP1-3 are on the surface, and VP4 is internal. VP1 is the major antigen of FMDV capsid protein that contains the major B-cell epitope, which is the major immunodominant epitope eliciting protective humoral immunity. Upon virus entry into a cell, the viral genome is rapidly translated into a polyprotein which is co- and posttranslationally cleaved by viral proteinases into several partially cleaved, likely functional, intermediates and ultimately into 12 mature protein.

Diagnosis of FMDV is based upon virus isolation, presences of FMD antigens or nucleic acid but the presence of serotype specific antibodies in the serum remains the method of choice due to its speed, efficiency and economy. Worldwide, tens of billion doses of FMD vaccine are administered every year. Endemic countries like India manufacture mono, bi and trivalent vaccines BioFMD-Oil™ (Biovet), FUTVAC™ (Brilliant Biopharma). Raksha (Indian Immunological) against strains O,A, Asia 1. Other manufacturers of FMDV vaccine are Bayer, Meril, and Intervet.

Cat # RV-400771-CP5, 3AB coated plates



FMDO 3AB was expressed in E. Coli as his-tag fusion protein (full length, >95%, ~33 KDa). Purified protein is coated on high binding strip plates (8 wells x 12 or 96 wells/plate), post-coated (blocked) and dried.

The plates are provided ready-to-use for the detection of antibodies to FMD 3AB protein by ELISA using appropriate ELISA.

ADI has antibodies to 3AB protein from rabbit, pig, cow and other species that can be used positive control.

Appropriate negative controls are also available.

Stability: 6-12 months at 2-8oC in unopened bags.

Shipping: room temp

Specificity & Cross-reactivity : FMDV-3AB serotype O is highly conserved in A (97%) ,C (96%), Asia 1 (97%),SAT1 (84%), 2 (91%) and 3 (84%) serotypes. Antibody cross reactivity has not been established. Recombinant protein is available for control studies.

References: Carrillo C (2005) J.Virol. 79:6487-6504; Samuel AR (2001)J Gen 82: 609-621; Lee K.N (2009) Virus Res. 139:117-121. Tully (2008) Virology 382: 250-256; Pereda A.J (2002) Arch. Virol. 147:2225-2230. Beard (2000) J. Virol. 74 :987-991.; Schumann (2008) Virus Genes 36: 401-413.

*This product is for In vitro research use only.

Related material available from ADI

- FMDO2A11-A Anti-Foot and mouth disease virus serotype O, 2A (FMDO-2A) peptide IgG, aff pure
- FMDO2A11-P Foot and mouth disease virus serotype O, 2A (FMDO-2A) Control/blocking peptide
- FMDO2A11-S Anti-Foot and mouth disease virus serotype O, 2A (FMDO-2A) peptide antiserum
- FMDO2B11-C Recombinant Foot and mouth disease virus serotype O, 2B (FMDO-2B) protein control for western blot
- FMDO2B11-S Anti-Foot and mouth disease virus serotype O, 2B (FMDO-2B) protein antiserum
- FMDO2B15-R-10 Recombinant (E-coli) Foot and mouth disease virus serotype O, 2B (FMDO-2B, his tag) purified
- FMDO2C11-S Anti-Foot and mouth disease virus serotype O, 2C (FMDO-2C) protein antiserum
- FMDO2C15-R-10 Recombinant (E-coli) Foot and mouth disease virus serotype O 2C (FMDO-2C, GST tag) purified
- FMDO3AB11-C Recombinant Foot and mouth disease virus serotype O, 3AB (FMDO-3AB) protein control for western blot
- FMDO3AB11-S Anti-Foot and mouth disease virus serotype O, 3AB (FMDO-3AB) protein antiserum
- FMDO3AB15-R-10 Recombinant (E-coli) Foot and mouth disease virus, serotype O, 3AB (FMDO-3AB, his tag) purified
- FMDO3C11-S Anti-Foot and mouth disease virus serotype O, 3C (FMDO-3C) protein antiserum
- FMDO3C15-R-10 Recombinant (E-coli) Foot and mouth disease virus serotype O, 3C (FMDO-3C, his tag) purified
- FMDO3D11-S Rabbit Anti-Foot and mouth disease virus serotype O, 3D (FMDO-3D) protein antiserum
- FMDO3D15-R-10 Recombinant (E-coli) Foot and mouth disease virus serotype O, 3D (FMDO-3D, his tag) purified

RV-400771-CP5-FMDV-3AB-Antigen-Coated-Plate 170308A