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- Gefahrgutzuschlag
- Expressversand

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## Anti-Viral hemorrhagic septicemia virus [3F1A2 ] Bulk Size Ab04106-1.1-BT

**Isotype and Format:** Mouse IgG1, Kappa

**Clone Number:** 3F1A2

**Alternative Name(s) of Target:** G; Spike glycoprotein

**UniProt Accession Number of Target Protein:** P27662

**Published Application(s):** in vitro, PNT, ELISA

**Published Species Reactivity:** VHSV, Viral hemorrhagic septicemia virus

**Immunogen:** The original antibody was generated by immunizing BALB/c mice with Egtved virus by intraperitoneal injections five times over two months, followed by an additional intravenous booster injection on week nine. The hybridoma cell line secreting clone 3F1A2 was selected from a subsequent fusion after three more months of continued immunization.

**Specificity:** This antibody is specific for the transmembrane envelope glycoprotein (G protein) of viral hemorrhagic septicemia virus (VHSV). The G protein is the only protein known to be present on the surface of the virus particle, and it constitutes less than 10% of the mass of the virus particle which is dominated by N, M1 and M2. This antibody demonstrated similar neutralizing activity to clone 3F1H10, and they were found to interfere with each other's binding reciprocally, which indicates they recognize the same or partially related epitopes.

**Application Notes:** The neutralizing activity of the original format of this antibody (mouse IgG1) against different VHSV isolates was determined by 50% PNT; it neutralized type I isolates VHSV (I-F1 and I-92) and type II isolate VHSV (II-31) well, but higher concentrations were needed to neutralize type III isolates (III-51 and III-37). ELISA was used to detect and quantify the antibody's binding efficiency to various VHSV strains. The antibody's binding kinetics were evaluated by surface plasmon resonance (SPR) analysis resulting in a  $K_D$  of 2.4 nM for the immobilized G protein of VHSV strain I-F1 and a  $K_D$  of 12.1 nM for the immobilized G protein of VHSV strain I-92 (Lorenzen et al., 2000; PMID: 10938729). The Fab and recombinant single-chain antibody fragments (scAbs) versions of this antibody neutralized VHSV, indicating that the Fc moiety and divalency of the antibody molecules are unnecessary for neutralization. However, the neutralizing activity of Fab and scAb fragments was generally lower compared to the parent antibody due to the higher avidity of the divalent parent molecules; the Fab and scAb fragments exhibited a 10-100-fold increase in  $k_d$  compared to the parent MAb, while the  $k_a$ s were similar. The increased  $k_d$  was accompanied by decreased neutralizing activity. The  $K_D$  measured against immobilized G protein of VHSV strain DK-F1 was 2.4 nM for the parent MAb and 227 and 77 nM for the daughter Fab and scAb, respectively (Cupit et al., 2001; PMID:

11682124).

**Antibody First Published in:** Lorenzen et al. Three monoclonal antibodies to the VHS virus glycoprotein: comparison of reactivity in relation to differences in immunoglobulin variable domain gene sequences Fish Shellfish Immunol. 2000 Feb;10(2):129-42. doi: 10.1006/fsim.1999.0232 [PMID:10938729](#)

**Note on publication:** The original publication compares three monoclonal antibodies to the glycoprotein of viral hemorrhagic septicemia virus (VHSV) in terms of their reactivity and neutralizing activity, while examining the differences in immunoglobulin variable domain gene sequences and their potential role in antibody functionality.

## Product Form

**Size:** 1 mg Purified antibody in bulk size.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note - This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.