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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Anti-Viral hemorrhagic septicemia virus [3F1H10] Bulk Size Ab04105-21.0-BT

This antibody does not have a J-chain and therefore presents as a hexamer, rather than a pentamer.

Isotype and Format: Mouse IgM, Kappa
Clone Number: 3F1H10
Alternative Name(s) of Target: G; Spike glycoprotein; MAb-I
UniProt Accession Number of Target Protein: P27662
Published Application(s): immunoblot, in vitro, in vivo, PNT, ELISA, IF
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 3F1H10 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.
Application Notes: The neutralizing activity of the original format of this antibody (mouse IgG1) was measured at the cell culture level in a plaque neutralization test (50% PNT). This antibody was administered to rainbow trout via intraperitoneal injection to evaluate its passive immunization protective effect and efficacy against Egtved virus infection. This antibody was used as the primary antibody in immunoblotting (IB) to detect the viral glycoprotein. This antibody, conjugated with fluorochromes like FITC or TRITC, was employed to visualize and detect Egtved virus-infected cells. This antibody, which was highly neutralizing *in vitro*, also provided the highest degree of protection *in vivo* of the antibodies tested (Lorenzen et al., 1990; PMID: 1690259). This antibody's neutralizing activity against different VHSV isolates was determined by 50% PNT; This antibody's original format neutralized type I isolates VHSV (I-F1 and I-92) well, but higher concentrations were needed to neutralize type II isolates and even higher concentrations were required to neutralize type III isolates. An 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 3.8 nM for the immobilized G protein of VHSV strain I-F1 and a K_D of 64 nM for the immobilized G protein of VHSV strain I-92 (Lorenzen et al., 2000; PMID: 10938729). Monovalent versions of this antibody, in the form of Fab and recombinant single-chain antibody

fragments (scAbs), were able to neutralize VHSV, indicating that the Fc moiety and divalency of the antibody molecules are not necessary 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 antibody, while the k_as 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 3.8 nM for the parent antibody and 124 and 241 nM for the daughter Fab and scAb, respectively (Cupit et al., 2001; PMID: 11682124).

Antibody First Published in: Lorenzen et al. Neutralization of Egtved virus pathogenicity to cell cultures and fish by monoclonal antibodies to the viral G protein J Gen Virol. 1990 Mar;71 (Pt 3):561-7. doi: 10.1099/0022-1317-71-3-561 PMID:1690259

Note on publication: The original publication focuses on the characterization of monoclonal antibodies to the viral G protein of Egtved virus, demonstrating their neutralizing activity in vitro and their protective effects in rainbow trout.

Product Form

Size: 500 µg Purified antibody in bulk size.

Purification: Affinity Purified using a recombinant lectin column

Supplied In: PBS only.

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

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.