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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- 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-Envelope protein [5A] Standard Size Ab03416-30.11

This is an scFv fragment with a His tag.

Isotype and Format: scFv fragment (His), ScFv
Clone Number: 5A
Alternative Name(s) of Target: E protein; Envelope protein E; Genome polyprotein
UniProt Accession Number of Target Protein: P03314
Published Application(s): crystallography, functional assay, in vivo, IP, neutralize, ELISA
Published Species Reactivity: Yellow Fever Virus
Immunogen: The original antibody was generated by phage display method. Two antibody-phage libraries were constructed by repertoire cloning from yellow fever patients, subsequently pooled and panned with glycerol-purified non-inactivated YFV-17D virions.
Specificity: The antibody recognises a quaternary epitope on the envelope protein. The antibody does not bind to E proteins of ZIKV, DENV, or WNV.
Application Notes: The specificity of the scFv format of the antibody was confirmed by ELISA analysis. The antibody showed 50% and 100% neutralizing activity in plaque reduction neutralization assay (PRNT) using Vero cells against YFV strains 17D-204-WHO and Asibi at concentrations of approximately 1 µg/ml and 10 µg/ml, respectively. The antibody neutralized wild-type YFV strains of genotypes West Africa I (Nigeria 1987) and II (Asibi) and East/Central Africa (CAR 1986, Ethiopia 1961) with comparable efficiency in a PRNT on PS cells. Competitive ELISA showed that the scFv fragment competed for binding to YFV-17D virions with Ab02826. An immunoprecipitation assay with radiolabeled, purified YFV-17D virions was performed. The scFv fragment was found to precipitate a 55-kDa protein, corresponding to the molecular weight of the envelope glycoprotein (Daffis et al., 2005; PMID: 15919103). The structure of the scFv fragment of the antibody in complex with the E protein was determined. Surface plasmon resonance (SPR) experiments showed that the antibody bound to sE proteins from both YFV-17D and YFV-China with high affinities (KD values are 13.5 nM and 9.7 nM, respectively). The in vitro neutralizing activity for YFV was assessed using a modified fluorescence-activated cell sorting (FACS)-based assay in Vero cells. The antibody displayed extremely high neutralization activity against both YFV strains (IC50, 15 ng/mL and 6 ng/mL for YFV-China and YFV-17D, respectively). Mice treated with the antibody were completely protected against YFV-17D infection. Pre- and post-attachment neutralization assays were carried out in BHK-21 cells. In both cases the antibody efficiently neutralized the virus ((IC50= 19 ng/mL and IC50= 8 ng/mL respectively). Finally, the antibody partially blocked pH-dependent fusion of YFV-17D with liposomes (IC50,

19 ng/mL) (Lu et al., 2019).
Antibody First Published in: Daffis et al. Antibody responses against wild-type yellow fever virus and the 17D vaccine strain: Characterization with human monoclonal antibody fragments and neutralization escape variants Virology. 2005 Jul 5;337(2):262-72. PMID:15919103
Note on publication: Describes the generation, characterization and neutralizing capabilities of this antibody.

Product Form

Size: 50 µg Purified antibody.
Purification: Purified by Immobilized Metal Affinity Chromatography
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. 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.