

## Anti-Envelope protein domain III [POWV-80] Standard Size Ab03175-4.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

**Isotype and Format:** Mouse IgG2c, Fc Silent™, Kappa

**Clone Number:** POWV-80

**Alternative Name(s) of Target:** Core protein; Envelope protein E; Matrix protein; Peptide pr; Protein pr; Small envelope protein M; POWV

**UniProt Accession Number of Target Protein:** Q91LY1

**Published Application(s):** crystallography, neutralizing, ELISA, FC

**Published Species Reactivity:** Powassan virus

**Immunogen:** The original antibody was originated by immunizing C57BL/6J mice with POWV-SPO.

**Specificity:** The antibody binds to domain III of the envelope protein. The antibody cross reacts with tick-borne encephalitis virus (TBEV) and LGTV.

**Application Notes:** The specificity of the antibody (IgG2c) was determined by ELISA. The antibody was used for flow cytometric analysis of HEK-293T cells. The antibody showed neutralizing activity on Vero cell incubated with POWV MA51240. The antibody showed neutralizing activity also against TBEV and LGTV (EC50 respectively 8.4 and 103 ng/ml). The binding affinity of the antibody to POWV E was measured using biolayer interferometry (BLI), showing the antibody binds POWV E with an affinity (KD) of ~30 nM. The crystal structure of the Fab fragment in complex with POWV DIII was determined. The antibody might have therapeutic potential (VanBlargan et al., 2021; PMID: 33831142).

**Antibody First Published in:** VanBlargan Broadly neutralizing monoclonal antibodies protect against multiple tick-borne flaviviruses. J Exp Med. 2021 May 3;218(5):e20210174 [PMID:33831142](#)

**Note on publication:** The paper describes the development of a panel of neutralizing anti-Powassan virus antibodies.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. 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.