

Technical Data Sheet

InVivoMAb anti-Dengue virus type 4 E protein DIII



Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

Lot Specific Information

Lot Number: Lot Specific*
Volume: Lot Specific*
Concentration: Lot Specific* (generally 4 to 11 mg/ml) *
Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number: BE0437
Clone: DV4-E88
Isotype: Mouse IgG2c, κ
Recommended Isotype Control(s): InVivoMAb polyclonal mouse IgG
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: DENV-4 1036, DENV-4 H-241, and DENV-4 DIII
Reported Applications: *in vivo* neutralization of DENV-4
in vitro neutralization of DENV-4
Focus reduction neutralization test (FRNT)
ELISA
Flow cytometry
Western blot

Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives

Endotoxin: <2EU/mg (<0.002EU/ μ g)
Determined by LAL gel clotting assay

Purity: >95%
Determined by SDS-PAGE

Sterility: 0.2 μ m filtration

Production: Purified from cell culture supernatant in an animal-free facility

Purification: Protein G

RRID:
Molecular Weight: 150 kDa

Description

The DV4-E88 monoclonal antibody reacts with the DIII domain on the E protein of dengue virus serotype 4 (DENV-4). This serotype-specific antibody does not cross-react with DENV-1, DENV-2, or DENV-3, i.e., the other serotypes of dengue virus (DENV). DENV is an *Aedes aegypti* and *A. albopictus* mosquito-transmitted flavivirus that causes over 100 million annual infections in tropical and sub-tropical regions. Mild dengue illness is characterized by fever, headache, and myalgia, while severe dengue disease can lead to hemorrhagic and capillary leak syndrome, i.e., dengue hemorrhagic fever (DHF)/dengue shock syndrome (DSS). Structurally, DENV is a single-stranded positive-polarity RNA virus, with its envelop (E) protein having three domains. The DV4-E88 monoclonal antibody binds (conformationally) to the lateral ridge (LR) of Domain III (DIII) on DENV-4 (quaternary epitope on the E dimer). This antibody does not recognize yeast surface expressed or isolated DENV-4 E protein DIII. The DIII-LR region contains host cell surface receptor recognition sites, and it is involved in the induction of virus-neutralizing antibodies. In *in vitro* studies, the DV4-E88 monoclonal antibody neutralized 1036, TVP-376, and TVP-986 genotype II strains of DENV-4. In experiments involving AG129 mice, a single *in vivo* injection of DV4-E88 monoclonal antibody (100–500 μ g/mouse) prior to viral infection provided modest to significant protection against DENV-4

strains H-241 and TVP-376.

Storage

Store at the stock concentration at 4°C. **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Bio X Cell, LLC

<https://bioxcell.com>

+1-866-787-3444

customerservice@bioxcell.com

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