Technical Data Sheet

InVivoMAb anti-Dengue virus type 2 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:	**BE0432**
Clone:	**DV2-96**
Isotype:	Mouse IgG2c, κ
Recommended Dilution Buffer:	InVivoPure pH 6.0T Dilution Buffer
Immunogen:	1:1 mixture of DENV-2 strains 16681 and NGC
Reported Applications:	*in vivo* neutralization of DENV-2 *in vitro* neutralization DENV-2 ELISA Flow cytometry Plaque reduction neutralization tests (PRNT) Antibody-dependent enhancement (ADE)
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/µg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 µm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
Molecular Weight:	150 kDa

Description

The DV2-96 monoclonal antibody reacts with sites along the lateral ridge of the DIII domain on the E protein of dengue virus serotype 2 (DENV-2). Dengue virus (DENV) is a single-stranded RNA virus that causes dengue fever and is transmitted to humans by infected female mosquitoes (Aedes aegypti). DENV infections have emerged as a global health problem in the tropics and subtropics, risking almost 50% of the world's population. DENV has four genetically related but antigenically distinct serotypes, namely DENV-1, DENV-2, DENV-3, and DENV-4. After infection, the DENV virus particles stay viable and replicate within RBCs, platelets, and hemopoietic cells. According to scientific research, depending on pre-existing antibodies and the following infecting serotype, a DENV infection can either protect against or increase the severity of a subsequent dengue infection, e.g., DENV-2. Experimental studies have shown that a larger neutralizing antibody titer is required to protect against symptomatic DENV-2 than other serotypes, and a wide range of pre-existing anti-DENV-binding antibody titers can exacerbate DENV-2 symptoms and sickness. All DENV serotypes are neurotropic, but DENV-2 causes severe to potentially fatal deterioration of the CNS, and DENV-2 is the most frequent cause of dengue epidemics worldwide. Experimental research involving BHK21 cell-based PRNT assays demonstrated the in vitro neutralizing activity of the DV2-96 monoclonal antibody against multiple DENV-2 genotypes, such as 16681, Southeast Asian; NGC, Southeast Asian; C0477, Southeast Asian; ArA6894, Indian; IQT2913, American; and PM33974, West African. Notably, in antibody-dependent enhancement (ADE) assays using P388D1 cells, in vitro incubation of a range of concentrations of DV2-96 monoclonal antibody with immature DENV (prior to infection) promoted the infectivity of immature DENV particles through its

ADE effects. In prophylactic experiments with BALB/c mice, a single in vivo dose of the DV2-96 monoclonal antibody (500 µg/mouse) one day prior to an intracranial infection with DENV-2 NGC provided significant protection against the lethal infection of DENV-2 NGC. Post-infection therapeutic experiments also demonstrated the in vivo protective efficacy of the DV2-96 monoclonal antibody against DENV-2 NGC infection in mice.

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.

Application References

For a complete list of references, visit https://bioxcell.com/be0432?bxcs=9k1b3a#tab_references or scan the QR code below.

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