Technical Data Sheet

InVivoMAb anti-WNV E protein DI-DII

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:	**BE0430**
Clone:	**E53**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2a isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Recombinant WNV E protein
Reported Applications:	*in vivo* protection against WNV infection *in vitro* neutralization of WNV *in vitro* blocking of WNV-cell attachment *in vitro* opsonization of WNV infected cells Plaque reduction neutralization tests (PRNT) Antibody-dependent enhancement (ADE) Flow cytometry ELISA
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	<2EU/mg (<0.002EU/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 A
RRID:	
Molecular Weight:	150 kDa

Description

The E53 monoclonal antibody reacts with an epitope in domain I and II of the envelope (E) protein, i.e., within amino acids 1-415 of the ectodomain, on West Nile virus (WNV). Monoclonal antibody clone E53 does not bind domain III of WNV's E protein, and this high affinity DII-fusion loop-reactive antibody exhibits limited capacity to neutralize mature WNV virions. This is because the recognizable epitope is buried on the surface of the virus particle, hence not accessible to the antibody. Experimental studies showed that the E53 antibody does not exhibit inhibitory activity against viral particles lacking a precursor membrane (prM) fragment, which signified that the neutralizing activity of this antibody is dependent on the maturation state of the virion. Moreover, the neutralization activity of E53 monoclonal antibody has been observed to be temperature dependent. Like other fusion-loop-specific anti-E monoclonal antibodies, the monoclonal antibody E53 preferentially binds to the immature form of WNV as well as DENV particles. WNV antibody clone E53 is commonly used for WNV neutralization experiments through plaque reduction assay or plaque reduction neutralization tests (PRNT) in cultured

cells. This antibody has also been shown to block Vero cell infection with WNV in vitro, and several mechanistic studies have established that the E53 antibody has the capability of inhibiting WNV's attachment to the cells. Functional studies on monoclonal antibody clone E53 have shown that the prophylactical administration of this antibody protects mice against lethal WNV infection in vivo.

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.

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