Technical Data Sheet

InVivoMAb anti-Zika virus E protein DIII-LR

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:	**BE0431**
Clone:	**ZV-67**
Isotype:	Mouse IgG2c, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2c isotype control, anti-dengue virus
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	ZIKV (MR-766), ZIKV (H/PF/2013) and ZIKV E protein (DIII)
Reported Applications:	*in vivo* inhibition of ZIKV infection *in vitro* neutralization of ZIKV ELISA Flow cytometry Western blot Focus forming assay (FFA) Focus reduction neutralization test (FRNT) Plaque reduction neutralization test (PRNT)
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 A
Molecular Weight:	150 kDa

Description

The ZV-67 monoclonal antibody reacts with Zika virus envelope (E) protein at the lateral ridge of domain III (DIII-LR), and it is reported to neutralize infections of American, African, and Asian strains of Zika virus (ZIKV). Biologically, ZIKV is a positive-stranded RNA virus that is transmitted through Aedes aegypti (the yellow fever mosquito). ZIKV gets transmitted through sexual contact as well, and ZIKV infections during pregnancy have been linked to developmental defects in newborns e.g., congenital zika syndrome (CZS), which is characterized by neuropathogenesis and microcephaly in unborn babies, eye abnormalities, arthrogryposis, etc., In adults also, the ZIKV infections lead to serious neurological complications. ZIKV's genome for seven non-structural proteins (NS1, NS2A, NS2B, NS3, NS4A, NS4B, and NS5) and the ZIKV enveloped virion consists of three structural proteins - capsid (C), membrane (M), and envelope (E). In experimental studies, the E protein of ZIKV is often targeted with the ZV-67 monoclonal antibody which was generated by immunizing a lethal mouse model with ZIKV (MR-766), ZIKV (H/PF/2013), and the recombinant E protein DIII domain. This antibody specifically binds to the immunoglobulin-like segment DIII lateral ridge (DIII-LR) of the ZIKV E protein, which is responsible for viral assembly, attachment, entry, and fusion. In ELISA and Western blot, the ZV-67 monoclonal antibody has been reported to specifically

detect the recombinant ZIKV E protein DIII and ZIKV E protein reporter virus particles (RVPs) in transfected cells. Several in vitro investigations have reported the neutralization potential of the ZV-67 monoclonal antibody against ZIKV H/PF/2013, ZIKV/KOR/SNU/2016, ZIKV/PRVABC59, African strains (MR-766, Uganda 1947, and Dakar 41519, Senegal 1982), American stain (Paraiba 2015, Brazil strain), Zika virus MR766 mutants, and ZIKV E protein-RVPs. In animal studies, in vivo administration of the ZV-67 monoclonal antibody provided significant protection against ZIKV Dakar 41519 infection in young mice and against ZIKV Asian strain GZ01 infection in pregnant mice. The ZV-67 monoclonal antibody does not show any cross-reactivity with Japanese encephalitis (JEV) or Dengue virus (DENV).

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/be0431?bxcs=9k1b3a#tab_references or scan the QR code below.

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

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