Technical Data Sheet

InVivoMAb anti-Venezuelan equine encephalitis virus E2 protein

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:	**BE0435**
Clone:	**VEEV-57**
Isotype:	Mouse IgG2c, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2c isotype control, anti-dengue virus
Recommended Dilution Buffer:	InVivoPure pH 6.0T Dilution Buffer
Immunogen:	Attenuated VEEV strains
Reported Applications:	*in vivo* protection against VEEV *in vitro* neutralization of VEEV Focus reduction neutralization test (FRNT) Plasma membrane fusion-from-without (FFWO) Inhibition of viral attachment on cells Inhibition of viral egress ELISA
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
RRID:	
Molecular Weight:	150 kDa

Description

The VEEV-57 monoclonal antibody reacts with the E2 protein of the Venezuelan equine encephalitis virus (VEEV), a mosquito-transmitted neurotropic alphavirus that causes inflammation of the brain and death in humans. Due to its potential for aerosol spread and the current lack of adequate medical countermeasures, VEEV is considered a bioterrorism threat. The positive-stranded RNA of this enveloped virus encodes four nonstructural proteins (NSP1-4) and five structural proteins, namely C (capsid), p62 (E3 and E2), 6K, and E1. The VEEV virion includes a nucleocapsid surrounded by a lipid envelope embedded with envelope glycoprotein-based E2 and E1 heterodimers assembled into trimeric spikes on the viral surface. The VEEV-57 monoclonal antibody recognizes distinct surface epitopes through its binding with the non-conserved residues (between AA 184-225) of the E2 glycoprotein in the A strand of domain B in VEEV. This antibody does not cross-react with any other alphaviruses. In vitro studies and FRNT assays have shown the neutralization activity of the VEEV-57 monoclonal antibody against SINV-VEEV TRD (IAB), VEEV TC-83 (IAB), SINV-VEEV INH9813 (IC), and SINV-VEEV ZPC738 (ID). Mechanistic studies revealed that the VEEV-57 monoclonal antibody inhibits VEEV attachment to Vero cells, viral egress, viral fusion, and LDLRAD3-D1-Fc binding. This antibody exhibited significant viral fusogenic activity in the FFWO assay. The

VEEV-57 monoclonal antibody has also been used for immunocapture of virus-like particles (VLPs) in surface plasmon resonance (SPR) analysis. The Diamond Lab at Washington University School of Medicine (USA) evaluated the in vivo efficacy of the VEEV-57 monoclonal antibody in a lethal challenge model of epizootic VEEV TrD in mice. A single 100-µg i.p. dose of the VEEV-57 monoclonal antibody was administered in vivo to young, outbred CD-1 mice one day before or after an aerosol viral inoculation, and the antibody provided prophylactic as well as post-exposure/therapeutic effects against the VEEV infection.

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/be0435?bxcs=9k1b3a#tab_references or scan the QR code below.

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

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © 2025 Bio X Cell, LLC