

Anti-E1 protein [DC1.7] Bulk Size Ab03734-21.0-BT

This antibody does not have a J-chain and therefore presents as a hexamer, rather than a pentamer.

Isotype and Format: Mouse IgM, Kappa

Clone Number: DC1.7

Alternative Name(s) of Target: CHIKV E1; Structural polyprotein; Envelope glycoprotein E1; Spike glycoprotein E1

UniProt Accession Number of Target Protein: Q8JUX5

Published Application(s): BLI, IP, neutralize, ELISA, FC

Published Species Reactivity: Chikungunya virus (CHIKV), Mayaro virus (MAYV), Ross River (RRV), Sindbis virus (SINV)

Immunogen: The original antibody was isolated from the peripheral blood lymphocytes of a human patient with a history of symptomatic CHIKV infection using single B cell sorting with biotinylated p62-E1 hybrid protein.

Specificity: This antibody binds and epitope near the E1 DIII domain of the Chikungunya virus (CHIKV), which is the causative agent of zoonotic disease in humans called Chikungunya. Additionally, this antibody also cross reacts with multiple arthritogenic alphaviruses like Mayaro virus (MAYV), Ross River (RRV) and Sindbis virus (SINV) (PMID: 34416146). CHIKV belongs to the alphavirus genus of the Togaviridae family and is transmitted to human by infected mosquito bites. A CHIKV infection causes fever and severe joint pain. Other symptoms include muscle pain, joint swelling, headache, nausea, fatigue and rash. The disease mostly occurs in Africa, Asia and the Indian subcontinent.

Application Notes: The binding characterization of the IgG antibody for CHIKV E1 protein was done using ELISA and Biolayer interferometry (BLI). This antibody was capable of binding biotinylated p62-E1 hybrid protein in a flow cytometric assay. This antibody was also capable of immunoprecipitating the E1 envelope protein of CHIKV. This antibody was can neutralize CHIKV 181/25 and CHIKV LR2006_OPY1 with IC50 value in the low nanomolar range and 13nM respectively. This antibody could not provide sufficient in vivo protection from CHIKV infection (PMID: 31697791).

Antibody First Published in: Quiroz et al. Human monoclonal antibodies against chikungunya virus target multiple distinct epitopes in the E1 and E2 glycoproteins. PLoS Pathog. 2019 Nov; 15(11): e1008061. [PMID:31697791](#)

Note on publication: Describes the generation of antibodies against chikungunya virus.

Product Form

Size: 500 µg Purified antibody in bulk size.

Purification: Affinity Purified using a recombinant lectin column

Supplied In: PBS only.

Storage Recommendation: Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.