

Antibody Datasheet / Certificate of Analysis

Product Name:	Human IgM anti-Flavivirus Envelope protein
Antibody:	This humanised IgG1 anti flavivirus envelope protein monoclonal antibody has been prepared by chimerization from the mouse monoclonal antibody clone 4G2. The original variable domains of this antibody have been retained, whilst the constant regions have been replaced with human IgM. The antibody is then expressed in HEK293 cells
Clone number:	4G2
Isotype:	Human IgM
Product code:	MAB12269-100
Batch Number:	
Immunogen:	Dengue Virus Type 2 antigen
Amount:	50ug
Concentration:	1.0 mg/ml
Buffer:	Phosphate Buffered Saline pH7.4
Preservative:	0.02% Proclin 300.
Purification:	Antibody was purified from hybridoma cell culture supernatant by lectin affinity Chromatography.
Specificity:	Recognises flavivirus group specific antigens (Dengue virus, West Nile Virus, Japanese Encephalitis, Zika virus etc). It binds to the fusion loop at the extremity of domain II of protein E.

Applications: ELISA
Neutralisation
Western Blot (non-reducing conditions)
Flow cytometry

Antigen background: This antibody binds to a conserved epitope on the E protein of the flavivirus family. It has been shown to recognise Dengue virus, West Nile virus, Japanese Encephalitis virus and Zika Virus (Aubry et al. 2016). It binds to the fusion loop at the extremity of domain II of E protein and prevents syncytia formation (Summers, 1989). The epitope is highly conserved amongst flaviviridae and has been functionally analyzed in detail by Crill and Chang (2004)

References: **Nawa, M. et al (2001)** Development of dengue IgM-capture enzyme-linked immunosorbent assay with higher sensitivity using monoclonal detection antibody. J. Virol Methods 92:65-70.

Aubry, M. et al (2016) Inactivation of Zika virus in plasma with amotosalen and ultraviolet A illumination. Transfusion 56:33-40

Summers, P. et al (1989) Flaviviruses can mediate fusion from without in Aedes albopictus mosquito cell cultures. Virus Res. 12:383-392

Crill, W. and Chang, G. (2004) Localization and characterization of flavivirus envelope glycoprotein cross-reactive epitopes. J. Virol. 78:13975 - 86

Recommended secondary antibody: Goat anti-human IgM:HRP Product code: PAB21461HRP-1000

Storage: Store at +4°C for up to three months, or at -20°C for longer periods
The antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

Direct ELISA data

Dengue Virus Serotype 2 VLP (DENV2-VLP-100 from Native Antigen) coated onto a plate at 5µg/ml. Anti-flavivirus antibody (AbFLAVENV-4G2) was added to plate in a 3-fold serial dilution starting at 1000 ng/ml. Detection performed using HRP labelled goat anti-mouse IgG (AbD Serotec, 0300-0108P).

