Data Sheet (Cat.No.TMPY-04869)

TargetMol

Zika virus (ZIKV) (strain Zika SPH2015) ZIKV-E/Envelope protein (Fc)

General Information

Protein Construction:	A DNA sequence encoding the Zika virus (strain Zika SPH2015) E / Envelope (domain III) (ALU33341.1) (Val593-Lys699) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Val 593
Species:	ZIKV
Expression Host:	HEK293 Cells
Accession:	ALU33341.1
Molecular Weight:	38.2 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Envelope of Zika virus is responsible for receptor binding and membrane. Analysis of the envelope protein of Zika, from Brazilian Zika SPH215 (KU321639), indicates predicted B and T cell epitopes in peptides that are consistent with those reported for dengue, YFYF and Japanese encephalitis. The envelope Domain II B cell epitope, to which much dengue non-neutralizing cross-reaction is attributed, is also conserved also in Zika virus, consistent with prior field observations of cross-reactivity with dengue and YF.Domain III of the Zika envelope protein, likely the

main specific neutralizing domain, is distinct from recent Brazilian dengue isolates and a recent Peruvian YF isolate (GQ379163), 76% of possible major histocompatibility complex class (MHC) I and MHC II binding peptides and potential B cell linear epitopes are unique to Zika virus.

Reference

Basarab M, et al. Zika virus. BMJ. 2016 Feb 26;352:i1049.
Júnior VL, et al. Zika virus: a review to clinicians, Acta Med Port 2015 Nov-Dec;28(6):760-765L.
Zammarchi, et al.Zika virus infection in a traveler returning to Europe from Brazil, March 2015.
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