

## Zika virus (strain Zika SPH2015) E/Envelope protein (His)

### 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 a polyhistidine tag at the C-terminus. Predicted N terminal: Val 593 |
| Species:              | ZIKV  |
| Expression Host:      | P. pastoris (Yeast)   |
| Accession:            | ALU33341.1  |
| Molecular Weight:     | 12.9 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:              | > 95 % as determined by SDS-PAGE.  |
| Endotoxin:           | Please contact us for more information.  |
| Formulation:         | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. 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.<br><small>Actual storage temperature shall be subject to the COA.</small> |
| 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

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