

# Recombinant YFV Envelope Protein, 287-679, C-sheep Fc tagged

**Cat. No.** E-04Y    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Recombinant Yellow Fever virus Envelope protein (NCBI accession number AWB15005AA287-679) produced in insect cells. Protein contains a C-terminal sheep Fc-tag. The protein was purified from culture supernatant by Protein G affinity and ion exchange chromatography.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | YFV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | Insect cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Length</b>   | 287-679                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | Translation of the positive-stranded viral genomic RNA in infected cells results in the synthesis of a polyprotein precursor of 3411 amino acids, which when proteolytically processed, generates 10 viral proteins. These are (from the amino- to carboxi-terminus of the precursor polyprotein): C; prM/M; E; NS1; NS2A; NS2B; NS3; NS4A; NS4B and NS5. The first three are viral structural proteins that form the virus particle together with the RNA molecule, namely capsid (C, 12–14kDa), membrane (M of 8 kDa, its precursor prM of 18–22 kDa), and envelope (E, 52–54 kDa). These are encoded in the first quarter of the genome. The remainder of the genome encodes the non-structural proteins (NS), numbered from 1 to 5 (NS1 to NS5) in accordance with the order of synthesis. E protein is required for receptor binding and viral attachment, fusion, penetration, hemagglutination, host range and cell tropism. It also has an important role in immunological anti-virus response, eliciting neutralizing |

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antibodies and inducing protective response. Native E protein forms homodimers and it undergoes conformational rearrangement into a fusogenic homotrimer after entering cells by receptor-mediated endocytosis. This conformational change occurs in the lower pH environment of the endosome where viral lipid envelope fusion with endosomal membrane, releases the nucleocapsids into the cells cytoplasm. Each E protein monomer has a molecular mass of 50-55 kDa and has three distinct domains: domain I, II and III. Domain III is the immunoglobulin-like receptor binding domain and is recognized by virus-neutralizing antibodies, making it a target for diagnostic assays. Yellow fever continues to be a public health concern in many countries of Africa and the Americas. It is estimated that 200000 cases and 30000 deaths are attributable to yellow fever annually.

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| <b>Form</b>           | liquid                                                                  |
| <b>Storage</b>        | Short Term Storage: -80 centigrade<br>Long Term Storage: -80 centigrade |
| <b>Concentration</b>  | 0.75 mg/ml                                                              |
| <b>Storage Buffer</b> | Dulbecco's phosphate buffered saline (DPBS) pH 7.4.                     |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | POLY polyprotein [ Yellow fever virus ]                                                                                                                                                                                                                                                                                                 |
| <b>Official Symbol</b> | POLY                                                                                                                                                                                                                                                                                                                                    |
| <b>Synonyms</b>        | POLY; polyprotein; polyprotein; core protein C; anchored core protein C; M protein precursor; matrix protein M; envelope protein; non-structural protein NS1; non-structural protein NS2a; non-structural protein NS2b; non-structural protein NS3; non-structural protein NS4a; 2K protein; non-structural protein NS4b; RNA-dependent |

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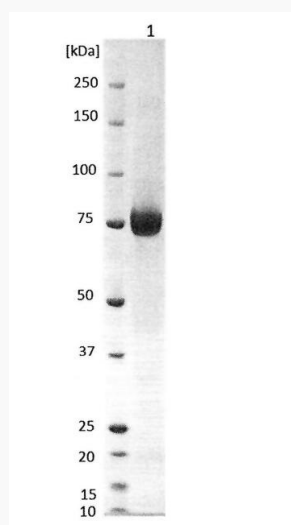
RNA polymerase; Envelope; E; env

**Gene ID** [1502173](#)

**Protein Refseq** [NP\\_041726](#)

**UniProt ID** [P03314](#)

**SDS-PAGE**



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