

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

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

SPECIFICATION

Product Overview	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.
Species	YFV
Source	Insect cells
Protein Length	287-679
Description	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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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.

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

GENE INFORMATION

Gene Name	POLY polyprotein [Yellow fever virus]
Official Symbol	POLY
Synonyms	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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

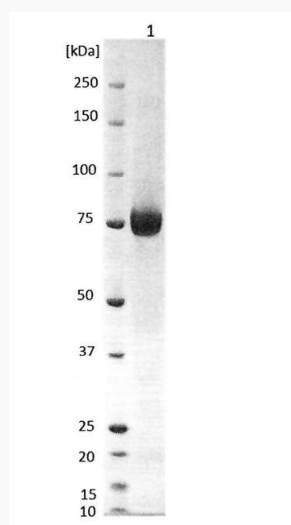
RNA polymerase; Envelope; E; env

Gene ID 1502173

Protein Refseq NP_041726

UniProt ID P03314

SDS-PAGE



 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA