



## Synonym

Envelope protein E/E protein (TBEV)

## Source

TBEV (European subtype, strain Neudoerfl) Envelope protein E, His Tag(ENE-T52H4) is expressed from human 293 cells (HEK293). It contains AA Ser 281-Lys 675 (Accession # [P14336](#)).

## Molecular Characterization

Envelope protein E(Ser 281-Lys 675)	Poly-his
P14336	

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 63.2 kDa. The protein migrates as 50-55 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.

## Purity

>90% as determined by SDS-PAGE.

>95% as determined by SEC-HPLC.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

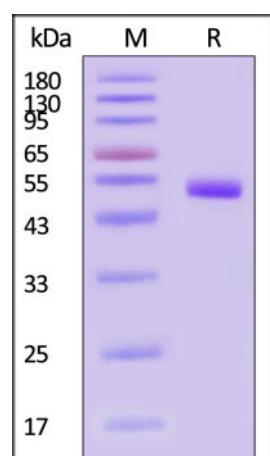
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

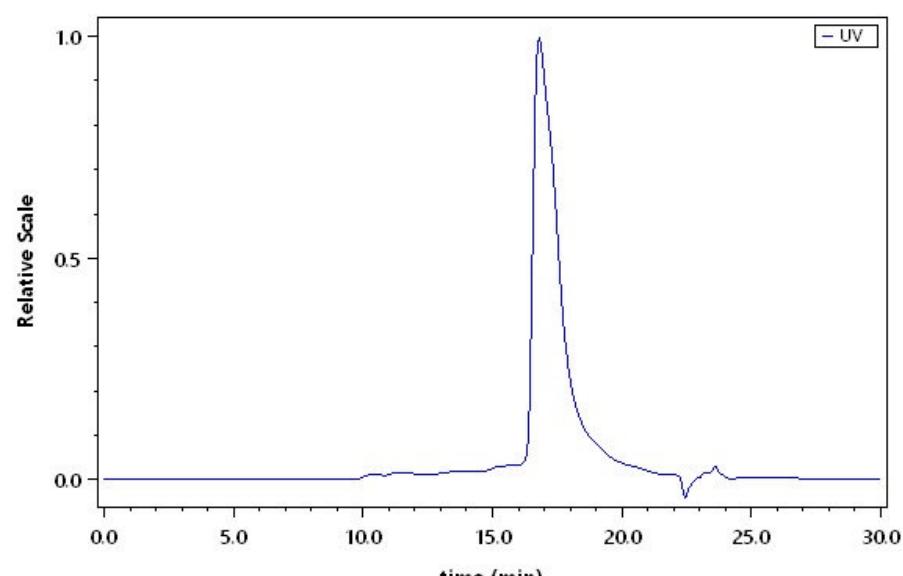
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



TBEV (European subtype, strain Neudoerfl) Envelope protein E, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## SEC-HPLC



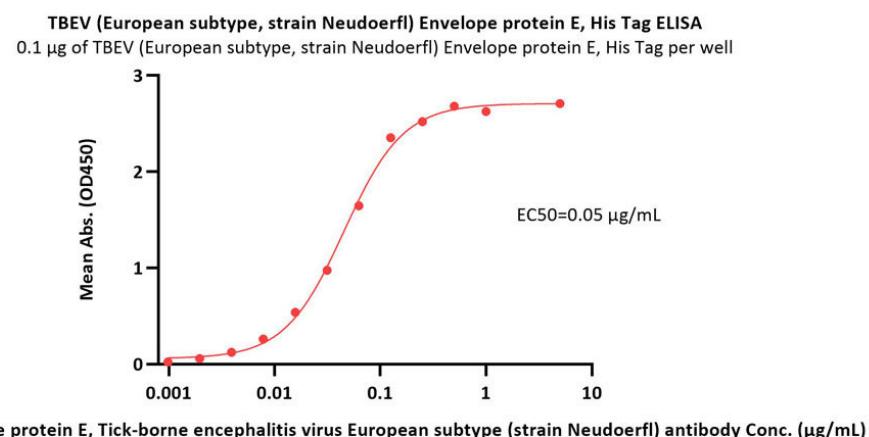
The purity of TBEV (European subtype, strain Neudoerfl) Envelope protein E, His Tag (Cat. No. ENE-T52H4) was greater than 95% as determined by SEC-HPLC.

## Bioactivity-ELISA

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Immobilized TBEV (European subtype, strain Neudoerfl) Envelope protein E, His Tag (Cat. No. ENE-T52H4) at 1 µg/mL (100 µL/well) can bind Anti-Envelope protein E, Tick-borne encephalitis virus European subtype (strain Neudoerfl) antibody with a linear range of 0.001-0.125 µg/mL (QC tested).

## Background

Tick-borne encephalitis virus (TBEV), which belongs to Family Flaviviridae, is the leading cause of Tick-borne encephalitis in human and animals across Europe and East Asia. The infection of TBE virus will lead to the illness called Tick-borne encephalitis with high morbidity and mortality. TBE virus has three regional subtypes of European subtype (TBEV-Eu), Far-eastern subtype TBEV (TBEV-FE) and Siberian subtype (TBEV-Sib) that dominate their respective regions; however, the sequence variety at amino acid level is quite low and the European subtypes' vaccines show cross protection against other subtypes. The envelope protein E is the major viral surface antigen that plays an important role in viral infection, making it a great target for vaccine development.

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