

# CD3E/CD3 epsilon

Catalog # PVGS1855

### Specification

## CD3E/CD3 epsilon - Product Information

Primary Accession Species Cynomolgus <u>095LI5</u>

Sequence Gln22-Asp117

Purity

> 95% as determined by Bis-Tris PAGE<br/>> 95% as determined by HPLC

**Endotoxin Level** Less than 1EU per  $\mu$ g by the LAL method.

**Biological Activity** 

Measured by its binding ability in a functional ELISA. Immobilized CD3E/CD3 epsilon, His, Cynomolgus at 0.5  $\mu$ g/ml (100  $\mu$ l/well) on the plate can bind Anti-CD3 Antibody, hFc Tag. Test result was comparable to standard batch.

Expression System HEK293

**Theoretical Molecular Weight** 11.7 kDa

Formulation

Lyophilized from a 0.22  $\mu$ m filtered solution in PBS[(pH 7.4).

Reconstitution

Centrifuge the tube before opening. Reconstituting to a concentration more than 100  $\mu$ g/ml is recommended. Dissolve the lyophilized protein in distilled water.

Storage & Stability

Upon receiving, the product remains stable up to 6 months at -20 °C or below. Upon reconstitution, the product should be stable for 3 months at -80 °C. Avoid repeated freeze-thaw cycles. -80°C for 3 months after reconstitution.Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## CD3E/CD3 epsilon - Additional Information

Gene ID 102133065

Other Names T-cell surface glycoprotein CD3 epsilon chain, CD3e, CD3E

**Target Background** 



CD3E, is a single-pass type I membrane protein.CD3 (cluster of differentiation 3) T cell co-receptor helps to activate both the cytotoxic T cell (CD8 naive T cells) and also T helper cells (CD4 naive T cells). It consists of a protein complex and is composed of four distinct chains. In mammals, the complex contains a CD3 $\gamma$  chain, a CD3 $\delta$  chain, and two CD3 $\epsilon$  chains.

### **CD3E/CD3** epsilon - Protein Information

#### Name CD3E

#### Function

Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR- mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways. In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development. Also participates in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region (By similarity). In addition to its role as a TCR coreceptor, it serves as a receptor for ITPRIPL1. Ligand recognition inhibits T-cell activation by promoting interaction with NCK1, which prevents CD3E-ZAP70 interaction and blocks the ERK- NFkB signaling cascade and calcium influx (By similarity).

Cellular Location Cell membrane {ECO:0000250|UniProtKB:P07766}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P07766}

#### **CD3E/CD3** epsilon - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

CD3E/CD3 epsilon - Images