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CD3E/CD3 epsilon
Catalog # PVGS1855

Specification

CD3E/CD3 epsilon - Product Information

Primary Accession Q95LI5

Species
Cynomolgus

Sequence
Gln22-Asp117

Purity
> 95% as determined by Bis-Tris PAGE
 > 95% as determined by HPLC

Endotoxin Level
Less than 1EU per μg by the LAL method.

Biological Activity
Measured by its binding ability in a functional ELISA. Immobilized CD3E/CD3 epsilon, His, Cynomolgus at 0.5 μg/ml (100 μl/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 μm filtered solution in PBS□(pH 7.4).**

Reconstitution
Centrifuge the tube before opening. Reconstituting to a concentration more than 100 μg/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 CD3γ chain, a CD3δ chain, and two CD3ε 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. Participates also 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.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD3E/CD3 epsilon - Images