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CD3E/CD3 epsilon

Catalog # PVGS1881

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 Anti-CD3 Antibody, hFc Tag at 0.5 μg/ml (100 μl/well) on the plate can bind CD3E/CD3 epsilon [Biotin], His, Cynomolgus. 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.

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.

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 CD247/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. CD3E ITAM phosphorylation creates docking sites for the protein kinase ZAP70 leading to ZAP70 phosphorylation and its conversion into a catalytically active enzyme. In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development (By similarity). 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 (By similarity). 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}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.