Datasheet for ABIN5954965

CD3 epsilon Protein (CD3E) (AA 23-126) (His tag,AVI tag,Biotin)

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Overview

Quantity:	200 µg
Target:	CD3 epsilon (CD3E)
Protein Characteristics:	AA 23-126
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CD3 epsilon protein is labelled with His tag,AVI tag,Biotin.

Product Details

Sequence:	AA 23-126
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Purity:	>90 % as determined by SDS-PAGE.
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	CD3 epsilon (CD3E)
Alternative Name:	CD3 epsilon (CD3E Products)
Background:	CD3e molecule, epsilon is also known as CD3E, is a T-cell surface single-pass type I membrane glycoprotein. CD3E contains 1 Ig-like (immunoglobulin-like) domain and 1 ITAM domain. CD3E, together with CD3-gamma, CD3-delta and CD3-zeta, and the T-cell receptor alpha/beta and

Target Details

	gamma/delta heterodimers, forms the T cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11. The epsilon polypeptide plays an essential role in T-cell development. CD3E plays an essential role in T-cell development, and defects in CD3E gene cause severe immunodeficiency. CD3E gene has also been linked to a susceptibility to type I diabetes in women. CD3E has been shown to interact with TOP2B, CD3EAP and NCK2.
Molecular Weight:	15.5 kDa
NCBI Accession:	NP_000724
Pathways:	TCR Signaling, CXCR4-mediated Signaling Events, Ubiquitin Proteasome Pathway

Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

Handling

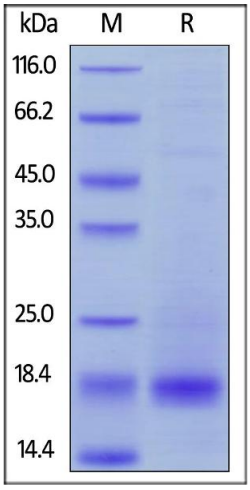
Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Publications

Product cited in:

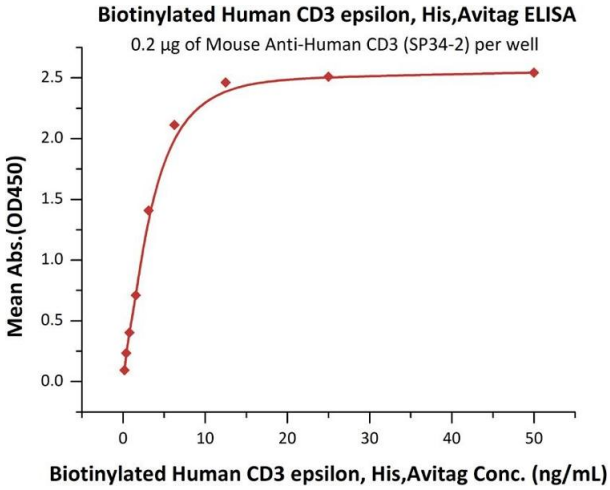
Knowling, Clark, Sjuts, Abdiche: "Direct Comparison of Label-Free Biosensor Binding Kinetics Obtained on the Biacore 8K and the Carterra LSA." in: **SLAS discovery : advancing life sciences R & D**, Vol. 25, Issue 9, pp. 977-984, (2020) (PubMed).

Images



SDS-PAGE

Image 1. Biotinylated Human CD3 epsilon, His,Avitag on under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90 % .



ELISA

Image 2. Immobilized Mouse A CD3 (SP34-2) at 2 μg/mL (100 μL/well) can bind Biotinylated Human CD3 epsilon, His,Avitag (ABIN5954965,ABIN6253533) with a linear range of 0.2-6 ng/mL (QC tested).