

Active Recombinant Human CD3E and CE3D Heterodimer Protein, His&Avi tagged

Cat. No. CD3-18H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	CD3-epsilon/delta protein heterodimer contains a CD3-epsilon extracellular domain (UniProt# P07766, amino acids Asp23-Asp126) and a CD3-delta extracellular domain (UniProt# P04234, amino acids Phe22-Ala105) fused with a proprietary cis-dimer motif followed by a His-tag at the epsilon C-terminus and an Avi-tag at the delta C-terminus was expressed in HEK293T.
Species	Human
Source	HEK293T
ProteinLength	CD3E: 23-126 aa CD3D: 22-105 aa
Description	Human cluster of differentiation 3 (CD3) epsilon/delta (CD3δ ϵ , CD3-epsilon/delta) heterodimer contains CD3-epsilon and CD3-delta within the CD3 complex. CD3 complex is a crucial part of the T cell receptor (TCR). CD3-epsilon and CD3-delta are Type I transmembrane proteins and members of the immunoglobulin superfamily. CD3-epsilon and CD3-delta each contain an extracellular domain composed of an immunoglobulin domain followed by a short a membrane-proximal connecting peptide, a transmembrane domain, and an intracellular domain. CD3-epsilon/delta together with CD3-epsilon/gamma heterodimer, T-cell receptor-alpha/beta (TCR), and CD3-zeta homodimer make up the TCR complex. CD3 can act as a marker antigen due to its presence in almost all T-cell lymphomas and leukemias and can be used to distinguish them from other cancers. Because CD3 is required for T-cell activation, it

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has become an important target for developing cancer therapeutics, as well as immunosuppressant therapies for type 1 diabetes and other autoimmune diseases. In the T cell receptor, CD3-epsilon/delta is responsible for transmitting activation signals when the TCR recognizes an antigen and is involved in activating both the cytotoxic T cell and T helper cells. Therefore, a recombinant CD3-epsilon/delta protein heterodimer mimicking the CD3-epsilon/delta heterodimer native conformation can be critical for target for drug discovery and immunotherapy research.

Molecular Mass	38 kDa
Purity	Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition
Application	Verified Applications: ELISA for CD3-epsilon-specific and CD3-delta-specific antibody binding assays. Suggested Applications: SPR & BLI for CD3-epsilon-specific antibodies and CD3-delta-specific antibodies. Animal immunization, RUO.
Storage	Store at -80 centigrade.
Storage Buffer	0.22µm filtered PBS, pH 7.4
Shipping	Frozen Dry Ice

GENE INFORMATION

Gene Name	CD3E CD3 epsilon subunit of T-cell receptor complex [Homo sapiens (human)]
Official Symbol	CD3E
Synonyms	CD3E; CD3 epsilon subunit of T-cell receptor complex; T3E; TCRE; IMD18; CD3epsilon; T-cell surface glycoprotein CD3 epsilon chain; CD3-epsilon; CD3e

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	antigen, epsilon polypeptide (TiT3 complex); CD3e molecule, epsilon (CD3-TCR complex); T-cell antigen receptor complex, epsilon subunit of T3; T-cell surface antigen T3/Leu-4 epsilon chain
Gene ID	916
mRNA Refseq	NM_000733
Protein Refseq	NP_000724
MIM	186830
UniProt ID	P07766
Gene Name 2	CD3D CD3 delta subunit of T-cell receptor complex [Homo sapiens (human)]
Official Symbol 2	CD3D
Synonyms 2	CD3D; CD3 delta subunit of T-cell receptor complex; T3D; IMD19; CD3DELTA; CD3-DELTA; T-cell surface glycoprotein CD3 delta chain; CD3 antigen, delta subunit; CD3 delta; CD3d antigen, delta polypeptide (TiT3 complex); CD3d molecule, delta (CD3-TCR complex); OKT3, delta chain; T-cell receptor T3 delta chain
Gene ID 2	915
mRNA Refseq 2	NM_000732
Protein Refseq 2	NP_000723
MIM 2	186790

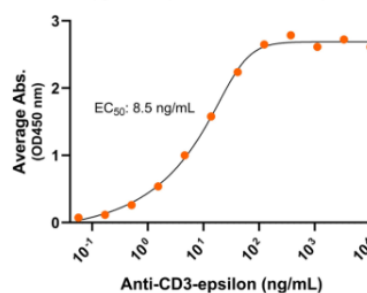
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UniProt ID 2
P04234
Bioactivity-Antibody Binding

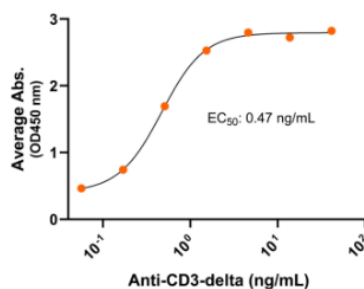
Human CD3-epsilon/delta-His-Avi heterodimer, ELISA
0.2µg of CD3-epsilon/delta heterodimer per well



Immobilized human CD3-epsilon/delta protein dimer, His-Avi Tag at 2 µg/mL (100 µL/well) can bind anti-human CD3-epsilon monoclonal antibody, with half maximal effective concentration (EC50) range of 4.2-16.9 ng/mL (QC tested).

Bioactivity-Antibody Binding

Human CD3-epsilon/delta-His-Avi heterodimer, ELISA
0.2µg of CD3-epsilon/delta heterodimer per well



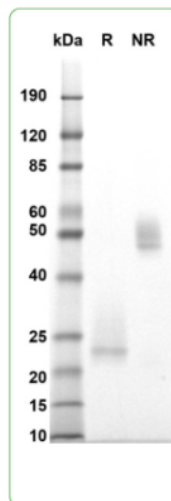
Immobilized human CD3-epsilon/delta protein dimer, His-Avi Tag at 2 µg/mL (100 µL/well) can bind anti-human CD3-delta monoclonal antibody, with half maximal effective concentration (EC50) range of 0.2-0.9 ng/mL (QC tested).

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SDS-PAGE



MW: Molecular Weight marker reduced condition R: CD3-epsilon/delta heterodimer dimer under reduced condition NR: CD3-epsilon/delta heterodimer dimer under non-reduced condition

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