

CD3D recombinant protein

CD3D Protein, Mouse, Recombinant (hFc Tag)

CATALOG #
AAA258160

HOST
HEK293 Cells

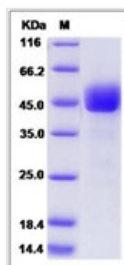
PRODUCT SYNONYMS

CD3D; CD3D Protein; Mouse; Recombinant (hFc Tag); Mouse CD3d/CD3 delta Protein (Fc Tag); T3d Protein; CD3d molecule; delta (CD3-TCR complex); CD3D recombinant protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. 5% Trehalose, 5% Mannitol and 0.01% Tween80.
Sequence	Met1-Ala105
Source	Mouse
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Phe 22
Tag	Fc
Protein Construction	A DNA sequence encoding the mouse CD3D (P04235)(Met1-Ala105) was expressed, fused with the Fc region of human IgG1 at the C-terminus.
Reconstitution	It is recommended that sterile water (400ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV-Vis.
Molecular Mass	The recombinant mouse CD3D/Fc is a disulfide-linked homodimer. The reduced monomer comprises 325 amino acids and has a predicted molecular mass of 36.4 kDa. The apparent molecular mass of the protein is approximately 44-48 kDa in SDS-PAGE under reducing conditions due to glycosylation.
Preparation and Storage	Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles Stability: Samples are stable for up to twelve months from date of receipt.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for CD3D recombinant protein	Description: T-cell surface glycoprotein CD3 delta chain, also known as CD3D, is a single-pass type I membrane protein. CD3D, together with CD3-gamma, CD3-epsilon and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. The majority of T cell receptor (TCR) complexes in mice and humans consist of a heterodimer of polymorphic TCRalpha and beta chains along with invariant CD3gamma, delta, epsilon, and zeta chains. CD3 chains are present as CD3gammaepsilon, deltaepsilon, and zetazeta dimers in the receptor complex and play critical roles in the antigen receptor assembly, transport to the cell surface, and the receptor-mediated signal transduction. T cell receptor-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. This complex is critical for T-cell development and function, and represents one of the most complex transmembrane receptors. The T cell receptor-CD3 complex is unique in having ten cytoplasmic immunoreceptor tyrosine-based activation motifs (ITAMs). CD3D contains 1 ITAM domain and has been shown to interact with CD8A. In the mouse, knockout of CD3delta allows some degree of T lymphocyte differentiation since mature CD4 and CD8 as well as TCRgamma delta T lymphocytes are observed in the periphery. In contrast, deleterious mutation of the CD3delta encoding gene in the human leads to a severe combined immunodeficiency characterised by the complete absence of mature T cell subpopulations including TCRalpha/beta and TCRgamma/delta. Defects in CD3D cause severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T-/B+/NK+ SCID) which is a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. In humans the absence of CD3 delta results in a complete arrest in thymocyte development at the stage of double negative to double positive transition and the development of gamma delta T-cell receptor-positive T cells is also impaired.
Product Categories/Family for CD3D recombinant protein	T Cell Receptor Signaling Pathway
References	Roifman CM. (2004) CD3 delta immunodeficiency. Curr Opin Allergy Clin Immunol. 4(6): 479-84. Pan Q, et al. (2006) Different role for mouse and human CD3delta/epsilon heterodimer in preT cell receptor (preTCR) function: human CD3delta/epsilon heterodimer restores the defective preTCR function in CD3gamma- and CD3gammadelta-deficient mice. Mol Immunol. 43(11): 1741-50. Le Deist F, et al. (2007) Expression anomalies of the CD3-TCR complex expression and immunodeficiencies. Med Sci (Paris). 23(2): 161-6.

NCBI AND UNIPROT INFORMATION

NCBI GI #	227498961
NCBI GeneID	12500
NCBI Accession #	NP_038515.3
NCBI GenBank Nucleotide #	NM_013487.3
UniProt Accession #	P04235
NCBI Official Full Name	T-cell surface glycoprotein CD3 delta chain
NCBI Official Synonym Full Names	CD3 antigen, delta polypeptide
NCBI Official Symbol	Cd3d
NCBI Official Synonym Symbols	T3d
NCBI Protein Information	T-cell surface glycoprotein CD3 delta chain; T-cell receptor T3 delta chain
UniProt Protein Name	T-cell surface glycoprotein CD3 delta chain
UniProt Gene Name	Cd3d
UniProt Synonym Gene Names	T3d
UniProt Entry Name	CD3D_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

