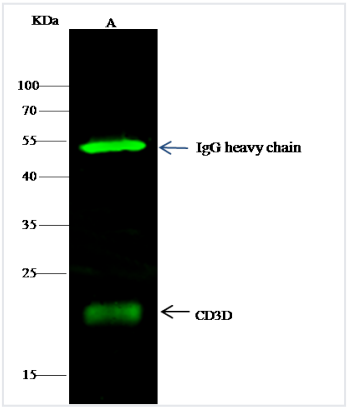
CD3D Antibody – Mouse Monoclonal

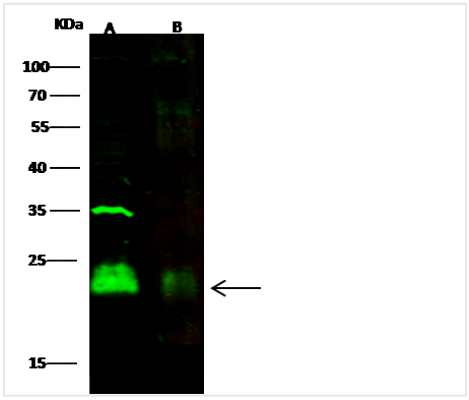
PRODUCT OVERVIEW

Product Name	CD3D, Monoclonal Antibody
Full Product Name	Anti-CD3D Antibody, Mouse Monoclonal
Product Gene Name	anti-CD3D antibody
Product Synonym Names	CD3d/CD3 delta Antibody, Mouse MAb; CD3d molecule, delta (CD3-TCR complex); Anti-CD3 delta Antibody; Anti-CD3-DELTA Antibody; Anti-IMD19 Antibody; Anti-T3D Antibody
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	12
Host	Mouse
Species Reactivity	Human
Form/Format	Liquid; 0.2um filtered solution in PBS
Purity/Purification	Protein A
Specificity	Human CD3d/CD3 delta
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.
Molecular Weight	14,484 Da
Immunogen	Recombinant Human CD3d/CD3 delta Protein
Conjugation	Unconjugated
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human CD3d/CD3 delta (rh CD3d/CD3 delta). The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.
Product Categories/Family for anti-CD3D antibody	T Cell Receptor Signaling Pathway
Applications Tested/Suitable for anti-CD3D antibody	Western Blot (WB), Immunoprecipitation (IP)
Application Notes for anti-CD3D antibody	WB: 1:500-1:2000 IP: 4-6uL/mg of lysate

Related Product Information for anti-CD3D antibody	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 TCRgammadelta 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 References and Citations for anti-CD3D antibody	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.
Other Notes	Small volumes of anti-CD3D antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD3D purchase	MBS8104498 is an antibody targeting CD3D. Also known as Anti-CD3D Antibody, Mouse Monoclonal. Reactive in Human. Host: Mouse.



Immunoprecipitation (IP) of anti-CD3D antibody
CD3D was immunoprecipitated using:Lane A:0.5 mg HuT78 Whole Cell Lysate2 uL anti-CD3D mouse monoclonal antibody and 60 ug of Immunomagnetic beads Protein G.Primary antibody:Anti-CD3D mouse monoclonal antibody,at 1:100 dilution Secondary antibody:Dylight 800-labeled antibody to Mouse IgG (H+L), at 1:7500 dilutionDeveloped using the odssey technique.Performed under reducing conditions.Predicted band size: 20 kDaObserved band size: 20 kDa



Western Blot (WB) of anti-CD3D antibody
Anti-CD3D mouse monoclonal antibody at 1:500 dilutionLane A: Jurkat Whole Cell LysateLane B: Molt-4 Whole Cell LysateLysates/proteins at 30 ug per lane.SecondaryGoat Anti-Mouse IgG H&L (Dylight800) at 1/15000 dilution.Developed using the Odyssey technique. Performed under reducing conditions.Predicted band size:19 kDaObserved band size:24 kDa

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD3D. It may not necessarily be applicable to this product.

NCBI GI #	4502669
NCBI GeneID	915

NCBI Accession #	NP_000723.1
UniProt Secondary Accession #	A8MVP6
UniProt Related Accession #	P04234
GenBank Nucleotide #	NM_000732.4
NCBI Official Full Name	T-cell surface glycoprotein CD3 delta chain isoform A
NCBI Official Synonym Full Names	CD3d molecule
NCBI Official Symbol	CD3D
NCBI Official Synonym Symbols	T3D; IMD19; CD3-DELTA
Protein Family	T-cell surface glycoprotein
NCBI Protein Information	T-cell surface glycoprotein CD3 delta chain
NCBI Summary for CD3D	The protein encoded by this gene is part of the T-cell receptor/CD3 complex (TCR/CD3 complex) and is involved in T-cell development and signal transduction. The encoded membrane protein represents the delta subunit of the CD3 complex, and along with four other CD3 subunits, binds either TCR alpha/beta or TCR gamma/delta to form the TCR/CD3 complex on the surface of T-cells. Defects in this gene are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (SCIDBNK). Two transcript variants encoding different isoforms have been found for this gene. Other variants may also exist, but the full-length natures of their transcripts has yet to be defined. [provided by RefSeq, Feb 2009]
Research Articles on CD3D	**1.** The docking site for CD3 subunits on the T Cell receptor beta chain has been identified by solution NMR.
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