

## Anti-CD3D Antibody (8X520)

### Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	8X520
Purification:	Protein A

### Applications

Verified Activity:	1. CD3D was immunoprecipitated using: <ul style="list-style-type: none"><li>-Lane A:0.5 mg HuT78 Whole Cell Lysate</li><li>-0.5 <math>\mu</math>L anti-CD3D rabbit monoclonal antibody and 15 <math>\mu</math>L of 50 % Protein G agarose.</li><li>-Primary antibody:<ul style="list-style-type: none"><li>-Anti-CD3D rabbit monoclonal antibody, at 1:500 dilution.</li><li>-Secondary antibody:<ul style="list-style-type: none"><li>-Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution.</li><li>-Developed using the odyssey technique.</li><li>-Performed under reducing conditions.</li><li>-Predicted band size: 20 kDa.</li><li>-Observed band size: 20 kDa.</li></ul></li></ul></li></ul>
	2. Anti-CD3D rabbit monoclonal antibody at 1:500 dilution. <ul style="list-style-type: none"><li>-Lane A: Jurkat Whole Cell lysate.</li><li>-Lysates/proteins at 30 <math>\mu</math>g per lane.</li><li>-Secondary<ul style="list-style-type: none"><li>-Goat Anti-Rabbit IgG H&amp;L (Dylight800) at 1/10000 dilution.</li><li>-Developed using the Odyssey technique.</li><li>-Performed under reducing conditions.</li><li>-Predicted band size:19 kDa.</li><li>-Observed band size:25 kDa(We are unsure as to the identity of these extra bands.)</li></ul></li></ul>
Application:	ELISA,IP,WB
Recommended	WB: 1:500-1:1000; ELISA: 1:25000-1:50000; IP: 1-2 $\mu$ L/mg of lysate

### Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

### Antigen Details

Immunogen: Recombinant Protein: Human CD3D protein (TMPY-01196)  
Antigen Species: Human  
Synonyms: CD3-DELTA;CD3  $\delta$ ;CD3d molecule, delta (CD3-TCR complex);CD3d molecule,  $\delta$  (CD3-TCR complex);IMD19;CD3- $\delta$ ;T3D;CD3 delta

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### Research Background

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 TCR alpha and beta chains along with invariant CD3 gamma, delta, epsilon, and zeta chains. 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 CD3 delta 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 TCR gamma/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. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

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