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CD3d Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11447

Specification

CD3d Antibody - Product Information

Application	**WB, IF, ICC**
Primary Accession	P04234
Reactivity	**Human, Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**18930**

CD3d Antibody - Additional Information

Gene ID 915

Positive Control	**WB: CCRFCEM, Jurkat, HuT78 whole cell lysates, IF/IC: Jurkat cells**
Application & Usage	**WB: 1:500 - 1:1000, IF/IC: 1:100 – 1:500**

Other Names
T3D; T-cell surface glycoprotein CD3 delta chain; T-cell receptor T3 delta chain; CD3d

Target/Specificity
CD3d

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
1 mg/ml in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
CD3d Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CD3d Antibody - Protein Information

Name CD3D

Synonyms T3D

Function
Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR- mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways (PubMed:2470098). In addition of this role of signal transduction in T-cell activation, CD3D plays an essential role in thymocyte differentiation. Indeed, participates in correct intracellular TCR-CD3 complex assembly and surface expression. In absence of a functional TCR-CD3 complex, thymocytes are unable to differentiate properly. Interacts with CD4 and CD8 and thus serves to establish a functional link between the TCR and coreceptors CD4 and CD8, which is needed for activation and positive selection of CD4 or CD8 T-cells(PubMed:12215456).

Cellular Location
Cell membrane; Single-pass type I membrane protein

Tissue Location
CD3D is mostly present on T-lymphocytes with its TCR-CD3 partners. Present also in fetal NK-cells

CD3d Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD3d Antibody - Images

CD3d Antibody - 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. 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). 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

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humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels.