

CD3 (19W11) Rabbit Monoclonal Antibody

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Catalog # AP93777

Product Information

Application	WB, IHC-P, FC, IF
Primary Accession	P04234 , P07766 , P09693 , P20963
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Calculated MW	18930

Additional Information

Gene ID	915
Dilution	WB~~1:1000 IHC-P~~N/A FC~~1:10~50 IF~~1:50~200
Storage Conditions	-20°C

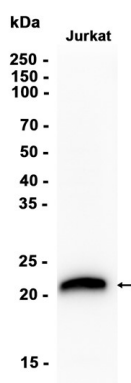
Protein Information

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 CD247/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

Background

CD3 is a complex of proteins that directly associates with the T cell receptor (TCR). The TCR/CD3 complex of T-lymphocytes consists of either a TCR alpha/beta or TCR gamma/delta heterodimer coexpressed at the cell surface with the invariant subunits of CD3 labeled gamma, delta, epsilon, zeta, and eta. The TCR recognizes antigens bound to major histocompatibility complex (MHC) molecules. TCR-mediated peptide-MHC recognition is transmitted to the CD3 complex, leading to the intracellular signal transduction. CD3 is considered to be a pan-T cell marker for detection of normal and neoplastic T cells.

Images



Western blot analysis of extracts from Jurkat cells using AP93777 at 1:1000.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.