

Product datasheet for **AM03098PU-N**

CD4 Mouse Monoclonal Antibody [Clone ID: MEM-16]

Product data:

Product Type:	Primary Antibodies
Clone Name:	MEM-16
Applications:	FC, IP
Recommended Dilution:	<u>Flow Cytometry</u> : 10 µg/ml Positive control: Peripheral blood lymphocytes <u>Immunoprecipitation</u> .
Reactivity:	Human
Host:	Mouse
Isotype:	IgM
Clonality:	Monoclonal
Immunogen:	HPB cell line (human peripheral blood leukemia T-cells).
Specificity:	The antibody MEM-16 recognizes an epitope EF loop of D1 domain of CD4 antigen, a 55 kDa transmembrane glycoprotein expressed on a subset of T lymphocytes ("helper" T-cells) and also on monocytes, tissue macrophages and granulocytes. Negative Species: Porcine.
Formulation:	PBS, pH 7.4 with 15 mM sodium azide as preservative. State: Purified State: Liquid purified IgG fraction (> 95% pure by SDS-PAGE).
Concentration:	lot specific
Purification:	Precipitation methods and size-exclusion chromatography.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	CD4 molecule
Database Link:	<u>Entrez Gene 920 Human P01730</u>



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Background:

CD4 is a single chain transmembrane glycoprotein and belongs to immunoglobulin supergene family. In extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). Transmembrane region forms 25 aa, cytoplasmic tail consists of 38 aa. Domains 1,2 and 4 are stabilized by disulfide bonds. The intracellular domain of CD4 is associated with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains.

Extracellular ligands: MHC class II molecules (binds to CDR2-like region in CD4 domain 1); HIV envelope protein gp120 (binds to CDR2-like region in CD4 domain 1); IL-16 (binds to CD4 domain 3), Human seminal plasma glycoprotein gp17 (binds to CD4 domain 1), L-selectin
Intracellular ligands: p56Lck

CD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection (human immunodeficiency virus; CD4 is primary receptor for HIV-1 surface glycoprotein gp120). CD4 regulates T-cell activation, T/B-cell adhesion, T-cell differentiation, T-cell selection and signal transduction. Defects in antigen presentation (MHC class II) cause dysfunction of CD4+ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).

Synonyms:

T-cell surface antigen T4/Leu-3