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Product datasheet for SM3019AS

CD4 Mouse Monoclonal Antibody [Clone ID: MEM-115]

Product data:

Product Type:	Primary Antibodies
Clone Name:	MEM-115
Applications:	FC, FN, IP, WB
Recommended Dilution:	Excellent for **Immunoprecipitation.** **Functional Applications:** The antibody *MEM-115* blocks binding of HIV gp120 to CD4 molecule and it also strongly inhibits CD4-MHC Class II interactions. **Flow Cytometry:** 3 µg/ml. Note: Although it has not been tested rigorously, following data suggest that the antibody *MEM-115* is a low-affinity antibody: its binding to T cells increases at elevated temperature; monovalent Fab fragments essentially do not bind to T cells. *MEM-115* is negative in Western blotting even with non-reduced samples of cell lysates.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Human thymocytes and T lymphocytes
Specificity:	The antibody *MEM-115* recognizes an epitope in the D1 domain of CD4 antigen, a 55 kDa transmebrane glycoprotein expressed on a subset of T lymphocytes (helper T cells) and also on monocytes, tissue macrophages and granulocytes.
Formulation:	PBS, pH 7.4 without preservatives State: Azide Free State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE). Product is 0.2 µm sterile filtered.
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein A
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C. **DO NOT FREEZE!**
Stability:	Shelf life: one year from despatch.

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Gene Name: CD4 molecule

Database Link: Entrez Gene 920 Human
P01730

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 diferentiation, 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

Product images:

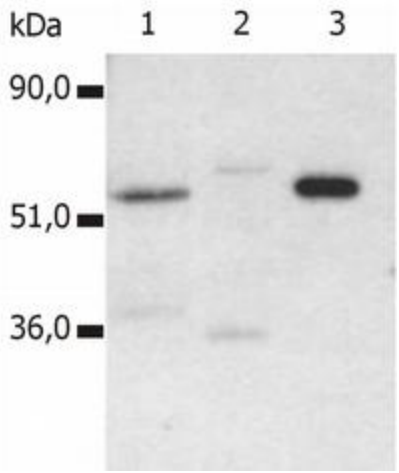

Figure 1. Immunoprecipitation of Human CD4 from the lysate T cells isolated from fresh buffy coats. Western blot was immunostained by anti-Human CD4 antibody (MEM-241). Lane 1: original lysate of T cells. Lane 2: immunoprecipitate by Negative Control antibody. Lane 3: immunoprecipitate by anti-Human CD4 antibody (MEM-115).