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Purified Mouse Anti-CD4 Monoclonal Antibody

CLX05AP

Lot:

Size: 0.1 mg

Clone: MEM-115

Isotype: Mouse IgG2a

Specificity: The antibody MEM-115 recognizes an epitope in the 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. It is negative in Western blotting even with non-reduced samples of cell lysates. HLDA V; WS Code T T-CD04.09

Immunogen: Human thymocytes and T lymphocytes.

Species Reactivity: Human

Application: **Immunoprecipitation**
excellent
Functional Application
The antibody MEM-115 blocks binding of HIV gp120 to CD4 molecule and it also strongly inhibits CD4-MHC Class II interactions.
Flow Cytometry
Recommended dilution: 3 µg/ml
Application notes:
MEM- Although it has not been tested rigorously, following data suggest that the antibody 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.

Purity: > 95% (by SDS-PAGE)

Purification: Purified from ascites by protein-A affinity chromatography.

Concentration: 1 mg/ml

Continued Overleaf...

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Storage Buffer: Tris buffered saline (TBS) with 15 mM sodium azide, approx. pH 8.0

Storage / Stability: Store at 2-8°C. Do not use after expiration date stamped on vial label. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

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).

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Laboratory Reagent For Research Use Only

BA 05/09/14