ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

□ Cat # AB-14510 Mouse Anti-Human CD4 IgG **Size:** □ 100ug

Introduction:

CD4 (cluster of differentiation 4) is a glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages, and dendritic cells. It was discovered in the late 1970s and was originally known as leu-3 and T4 before being named CD4 in 1984. In humans, the CD4 protein is encoded by the CD4 gene. Normally, about 65% of T cells in the blood are CD4+ (have CD4 protein protruding from their membrane). A mature T cell with either has CD4 or CD8, but not both. During one stage of development T cells develop CD4 and CD8 receptors, but they eventually are differentiated in the thymus and become more specialized. CD4 uses its D1 domain to interact with the β2-domain of MHC class II molecules. T cells expressing CD4 molecules on their surface, therefore, are specific for antigens presented by MHC II and not by MHC class I.
Using its intracellular domain, CD4 amplifies the signal generated by the T cell receptor by recruiting an enzyme, the tyrosine kinase Lck, which is essential for activating many molecular components of the signaling cascade of an activated T cell. Various types of T helper cells are thereby produced. The extracellular domain adopts an immunoglobulin-like beta-sandwich with seven strands in 2 beta sheets.
HIV-1 uses CD4 to gain entry into host T-cells and achieves this through its viral envelope protein known as gp120. The antigen has also been associated with a number of autoimmune diseases such as vitiligo and type I diabetes mellitus.

Synonyms:
gp55, HLA-2, L3 / T4, Ly-4, T cell antigen T4/LEU3, T4, sCD4, CD4mut.

Source of Antigen and Antibodies

Antigen	Human CD44
Ab Host/type	Mouse IgG2a, supplied in Borate buffered saline, pH 8.2
2-ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Isotype Controls for mouse IgG2a

20102-102	Mouse IgG2a isotype control, purified
20102-102-B	Mouse IgG2a-Biotin conjugate (isotype control)
20102-102-F	Mouse IgG2a-FITC conjugate (isotype control)
20102-102-FP	Mouse IgG2a-FITC-PE conjugate
20102-102-HP	Mouse IgG2a-HRP conjugate (isotype control)
20102-102-PC5	Mouse IgG2a-PE-Cy5 conjugate (isotype control)
20102-102-PE	Mouse IgG2a-PE conjugate (isotype control)

Shipping Conditions:

Antibody is shipped lyophilized at ambient temperature or in solution at 4oC.

Storage

In lyophilized form, for long periods, store at 4oC in a dry environment. After reconstitution, if not intended for use within a month, aliquot and store at -20oC. Store solution at 4oC.

Stability / Shelf Life: 1- Year lyophilized, 6 month in solution at 4oC.

Applications: ELISA, Western Blot, Immune precipitation, Immunohistochemistry, flow cytometry

Specificity: Human CD44. Cross reactivity with other proteins has not been established.

Reference: McMichael, A.K. (1987). Leukocyte Typing III: White Cell Differentiation Antigens, Oxford University Press; Knapp, W., 32:389; Lesley (1993) Adv. Immunol. 54:271.; Anwar (2000) Mod Pathol. 13(10):1121-1127; Ellis (1992). Clin Exp Immunol 90, 117-123.

for in vitro research use only

Related items:

AB-13210	Mouse Anti-Human CD4-FITC IgG
AB-13910	Rat Anti-Mouse B220 (CD45R) IgG
AB-14510	Mouse Anti-Human CD4 IgG
AB-16510	Rat Anti-Mouse CD4 IgG
AB-16710	Mouse Anti-Human CD4-biotinylated IgG
CD04-D1-50	Anti-Human CD4 FITC/CD2 PE
CD04-D2-50	Anti-Human CD4 FITC/CD7 PE
CD04-D3-50	Anti-Human CD4 FITC/CD8 PE
CD04F-100	Anti-Human CD4-FITC conjugate
CD04P-100	Anti-Human CD4-PE conjugate
CD04PC-100	Anti-Human CD4-PE-Cy5-conjugate
CD04-T1-100	Anti-Human CD4 FITC/CD8 PE/CD3 PE-Cy5
CD04-T2-100	Anti-Human CD4 FITC/CD8 PE/CD45 PE-Cy5
CD04UL-100	Anti-Human CD4 IgG, unlabeled

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com