anti-human CD4

Monoclonal Antibody HIT4a to CD4 (Human)

Cat-No: **21810041** 100 µg in 100 µl

Clone: HIT4a

Specificity: The CD4 (HIT4a) Antibody recognizes a 55 kDa type-I single-chain transmembrane glycoprotein. CD4 antigen is a coreceptor for HLA class II molecule and HIV (human immunodeficiency virus), which is present on 35-50% of peripheral blood lymphocytes-T helper/inducer (Th/Ti), 70-80% of thymocytes and in low density on the peripheral blood monocytes and tissue macrophages. Th/Ti helps Ig production by B lymphocytes by enhancing maturation and increasing effectiveness of cytotoxic CD8 T cells.

Isotype subclass: Mouse IgG2b, k

Form: The antibody was purified by protein G affinity chromatography.

Physical state: Liquid

Buffer/Additives/Preservative: PBS containing 0.09% sodium azide (pH 7.2).

Expiration date: The reagent is stable until the expiry date stated on the vial label

Storage conditions: Store at -20 °C. Avoid freeze/thaw cycles.

Application: Flow Cytometry

References:
Tadamitsu K. et al., eds. 1997. Leucocyte Typing VI: White Cell Differentiation Antigens. P49-52, 113-114 Garland Publishing, Inc., New York.

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).

Warning: Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

This material is offered for **research use only.** Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

ImmunoTools **Excellent Quality - Advantageously priced**
Gladiolenweg 2; 26169 Friesoythe; Germany
phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, info@immunotools.com
www.immunotools.com