

Anti-Human CD5 DyLight® 488 conjugated Antibody(monoclonal, 4E2)

Catalog # ABO14905

Product Information

Application	FC
Primary Accession	P06127
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Human CD5 DyLight® 488 conjugated Antibody (monoclonal, 4E2) . Tested in Flow Cytometry applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Additional Information

Gene ID	921
Other Names	T-cell surface glycoprotein CD5, Lymphocyte antigen T1/Leu-1, CD5, CD5, LEU1
Calculated MW	54578
Application Details	Flow Cytometry, 1-3 µg/1x10 ⁶ cells, Human
Subcellular Localization	Cell membrane ; Single-pass type I membrane protein
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Clone Names	Clone: 4E2
Immunogen	E. coli-derived human CD5 recombinant protein (Position: R25-L495).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross-reactivity with other proteins.
Storage	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.

Protein Information

Name	CD5
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Synonyms

LEU1

Function

Lymphoid-specific receptor expressed by all T-cells and in a subset of B-cells known as B1a cells. Plays a role in the regulation of TCR and BCR signaling, thymocyte selection, T-cell effector differentiation and immune tolerance. Acts by interacting with several ligands expressed on B-cells such as CD5L or CD72 and thereby plays an important role in contact-mediated, T-dependent B-cell activation and in the maintenance of regulatory T and B-cell homeostasis. Functions as a negative regulator of TCR signaling during thymocyte development by associating with several signaling proteins including LCK, CD3Z chain, PI3K or CBL (PubMed:[1384049](#), PubMed:[1385158](#)). Mechanistically, co- engagement of CD3 with CD5 enhances phosphorylated CBL recruitment leading to increased VAV1 phosphorylation and degradation (PubMed:[23376399](#)). Modulates B-cell biology through ERK1/2 activation in a Ca(2+)-dependent pathway via the non-selective Ca(2+) channel TRPC1, leading to IL-10 production (PubMed:[27499044](#)).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P13379}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P13379}

Background

CD5 is a member of the scavenger receptor cysteine-rich (SRCR) superfamily. Members of this family are secreted or membrane-anchored proteins mainly found in cells associated with the immune system. In humans, the gene is located on the long arm of chromosome 11. This protein is a type-I transmembrane glycoprotein found on the surface of thymocytes, T lymphocytes and a subset of B lymphocytes. The encoded protein contains three SRCR domains and may act as a receptor to regulate T-cell proliferation. Alternative splicing results in multiple transcript variants encoding different isoforms.

Images

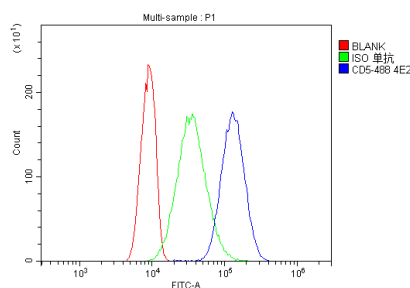


Figure 1. Flow Cytometry analysis of A431 cells using anti-Human CD5 antibody (M00480-Dyl488). Overlay histogram showing A431 cells stained with M00480-Dyl488 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Human CD5 Antibody (M00480-Dyl488, 1 μ g/ 1×10^6 cells) for 30 min at 20°C. Isotype control antibody (Green line) was mouse IgG (1 μ g/ 1×10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

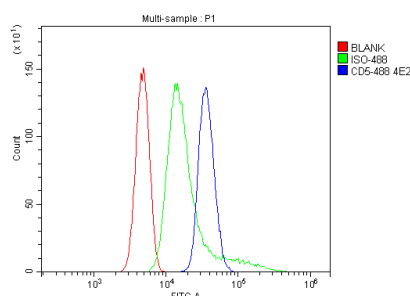


Figure 2. Flow Cytometry analysis of HL-60 cells using anti-Human CD5 antibody (M00480-Dyl488). Overlay histogram showing HL-60 cells stained with M00480-Dyl488 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Human CD5 Antibody (M00480-Dyl488, 1 μ g/ 1×10^6 cells) for 30 min at 20°C. Isotype control antibody (Green line) was mouse IgG (1 μ g/ 1×10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.