Human CD27/TNFRSF7 APC-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 57703

Catalog Number: FAB382A

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD27 in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody does not cross-react with recombinant human (rh) 4–1BB, rhBAFF R, recombinant mouse (rm) CD27, rhCD30, rhCD40, rhDR3, rhDR6, rhEDAR, rhFas, rhGITR, rhHVEM, rhLTRβ, rhNGF R, rhOPG, rmOX40, rhRANK, rhTAJ, or rhTNF RI.
Source	Monoclonal Mouse IgG_1 Clone # 57703
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human CD27 Thr21-Ile192 Accession # P26842
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

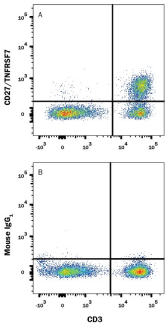
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CD27/TNFRSF7 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human CD3ε PE-conjugated Monoclonal Antibody (Catalog # FAB100P) and either (A) Mouse Anti-Human CD27/TNFRSF7 APC-conjugated Monoclonal Antibody (Catalog # FAB382A) or (B) Mouse IgG_1 Allophycocyanin Isotype Control (Catalog # IC002A). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human CD27 is a 50-55 kDa lymphocyte-specific member of the TNF receptor superfamily. CD27 is expressed on a subset of human thymocytes as well as NK cells, B cells, and $CD4^+$ and $CD8^+$ T cells. CD27 expression is up-regulated after TCR stimulation. Within the $CD4^+$ compartment, it is preferentially expressed on $CD45RA^+$ cells. In contrast, it is preferentially expressed on $CD45RO^+$ cells in the $CD8^+$ compartment. CD27 also appears to be a potential marker for memory B cells. It exists as both a disulfide-linked dimer on the cell surface and as a soluble 32 kDa protein found in serum. Human CD27 is a 260 amino acid (aa) protein with a 19 aa signal, a 173 aa extracellular domain, a 21 aa transmembrane domain, and a 48 aa cytoplasmic domain. The ligand for CD27 is CD70. CD70 is expressed on thymic stromal cells and multiple activated leukocytes including NK cells, $CD4^+$ and $CD8^+$ T cells, and γδ T cells. Additionally a subset of activated B cells express CD70. The CD27/CD70 interaction appears to be a weak costimulatory pathway involved in T cell and B cell immune response. CD27/CD70 interactions may be more involved in controlling the expansion phase of an immune response. This would be in contrast to B7/CD28 interactions, which are important for the activation phase of immune responses. Over aa 21-192, human and mouse CD27 share 60% aa sequence identity.

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