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Anti-B7-1/CD80 Antibody

Catalog # ABO10689

Product Information

Application	WB
Primary Accession	P33681
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for T-lymphocyte activation antigen CD80(CD80) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	941
Other Names	T-lymphocyte activation antigen CD80, Activation B7-1 antigen, BB1, CTLA-4 counter-receptor B7.1, B7, CD80, CD80, CD28LG, CD28LG1, LAB7
Calculated MW	33048
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Membrane; Single-pass type I membrane protein.
Tissue Specificity	Expressed on activated B-cells, macrophages and dendritic cells.
Source	Eukaryota
Protein Name	T-lymphocyte activation antigen CD80
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CD80(57-71aa EELAQTRIYWQKEKK).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities	Contains 1 Ig-like C2-type (immunoglobulin-like) domain.

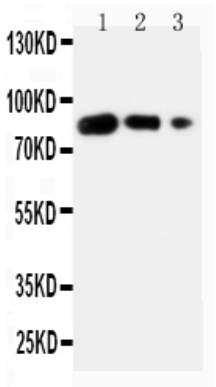
Protein Information

Name	CD80
Synonyms	CD28LG, CD28LG1, LAB7
Function	Costimulatory molecule that belongs to the immunoglobulin superfamily that plays an important role in T-lymphocyte activation (PubMed:38467718). Acts as the primary auxiliary signal augmenting the MHC/TCR signal in naive T-cells by acting as a ligand for the CD28 receptor which is constitutively expressed on the cell surface of T- cells (PubMed:12196291). In turn, activates different signaling pathways such as NF-kappa-B or MAPK leading to the production of different cytokines (PubMed:10438913). Also acts as an inhibitor of T- cell activation by acting as a ligand for CTLA4, a decoy receptor, thereby blocking CD28-mediated T-cell priming (PubMed:10583602, PubMed:11279502). In addition, CD28/CD80 costimulatory signal stimulates glucose metabolism and ATP synthesis of T-cells by activating the PI3K/Akt signaling pathway (PubMed:12121659). Also acts as a regulator of PDL1/PDCD1 interactions to limit excess engagement of PDL1 and its inhibitory role in immune responses (PubMed:36727298). Expressed on B-cells, plays a critical role in regulating interactions between B-cells and T-cells in both early and late germinal center responses, which are crucial for the generation of effective humoral immune responses (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Expressed on the surfaces of antigen-presenting cells.

Background

Cluster of Differentiation 80(also CD80 and B7-1) is a protein found on activated B cells and monocytes that provides a costimulatory signal necessary for T cell activation and survival. It is the ligand for two different proteins on the T cell surface: CD28(for autoregulation and intercellular association) and CTLA-4(for attenuation of regulation and cellular disassociation). CD80 works in tandem with CD86 to prime T cells. The CD80 genes encode B7-1 which are structurally similar members of the immunoglobulin superfamily expressed on a variety of hematopoietic cell types. Reeves et al.(1997) stated that B7-1 and B7-2 provide a costimulatory signal to T cells by interacting with CD28 and CTLA4.

Images



Anti-CD80 antibody, ABO10689, Western blottingLane 1: Recombinant Human CD80 Protein 10ngLane 2: Recombinant Human CD80 Protein 5ngLane 3: Recombinant Human CD80 Protein 2.5ng

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