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CD80 Antibody [11D1]

Catalog # ASC12146

Specification

CD80 Antibody [11D1] - Product Information

Application	**IHC-P, IF, ICC, E**
Primary Accession	P33681
Other Accession	NP_005182
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**Predicted: 32 kDa**
	Observed: 50 kDa KDa

CD80 Antibody [11D1] - Additional Information

Gene ID	**941**
Alias Symbol	**CD80**

Other Names
CD80 Antibody: CD80 molecule, B7, BB1, B7-1, B7.1, LAB7, CD28LG, CD28LG1

Reconstitution & Storage
CD80 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
CD80 Antibody [11D1] is for research use only and not for use in diagnostic or therapeutic procedures.

CD80 Antibody [11D1] - 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 together with 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). In addition, CD28/CD80 costimulatory signal stimulates glucose metabolism and ATP synthesis of T-cells by activating the PI3K/Akt signaling pathway (PubMed:<a

href="http://www.uniprot.org/citations/12121659" target="_blank">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 activated B-cells, macrophages and dendritic cells

CD80 Antibody [11D1] - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD80 Antibody [11D1] - Images

CD80 Antibody [11D1] - Background

CD80 Antibody: CD80, also known as B7-1, is a type I membrane protein that is a member of the immunoglobulin superfamily. Like the related protein CD86, this protein is expressed by antigen-presenting cells, and is the ligand for two proteins at the cell surface of T cells, CD28 and the cytotoxic T-lymphocyte-associated protein 4 (CTLA-4). Binding of this protein with CD28 antigen is a costimulatory signal for activation of the T-cell and induces T-cell proliferation and cytokine production. CTLA-4 binding negatively regulates T-cell activation and diminishes the immune response (1). Blocking the CTLA-4-CD80/CD86 interaction has been shown to enhance T-cell functions in acute lymphoblastomic leukemia (ALL), suggesting that this pathway may be an attractive target for future cancer immunotherapy (2).

CD80 Antibody [11D1] - References

Lane P. Regulation of T and B cell responses by modulating interactions between CD28/CTLA-4 and their ligands, CD80 and CD86. Ann NY Acad Sci 1997; 815:392-400.Feucht J, Kayser S, Gorodezki D, et al. T-cell responses against CD19+ pediatric acute lymphoblastic leukemia mediated by bispecific T-cell engager (BiTE) are regulated contrarily by PD-L1 and CD80/CD86 on leukemic blasts. Oncotarget 2016; 7:76902-19.