

**CD80 Antibody [12D9]**  
Catalog # ASC12148**Specification****CD80 Antibody [12D9] - Product Information**

Application	WB, IHC-P, IF, ICC, E
Primary Accession	<a href="#">P33681</a>
Other Accession	<a href="#">NP_005182</a>
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	Predicted: 32 kDa
	Observed: 50 kDa KDa

**CD80 Antibody [12D9] - Additional Information**

Gene ID	941
Alias Symbol	CD80
<b>Other Names</b>	
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 [12D9] is for research use only and not for use in diagnostic or therapeutic procedures.

**CD80 Antibody [12D9] - 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:<a href="http://www.uniprot.org/citations/38467718" target="\_blank">38467718</a>). 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:<a href="http://www.uniprot.org/citations/12196291" target="\_blank">12196291</a>). In turn, activates different signaling pathways such as NF-kappa-B or MAPK leading to the production of different cytokines (PubMed:<a href="http://www.uniprot.org/citations/10438913" target="\_blank">10438913</a>). In addition, CD28/CD80 costimulatory signal stimulates glucose metabolism and ATP synthesis of T-cells by activating the PI3K/Akt signaling pathway (PubMed:<a

<http://www.uniprot.org/citations/12121659> target="\_blank">12121659</a>). Acts also as a regulator of PDL1/PDCD1 interactions to limit excess engagement of PDL1 and its inhibitory role in immune responses (PubMed: <http://www.uniprot.org/citations/36727298> target="\_blank">36727298</a>). 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 [12D9] - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **CD80 Antibody [12D9] - Images**

#### **CD80 Antibody [12D9] - 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 lymphoblastic leukemia (ALL), suggesting that this pathway may be an attractive target for future cancer immunotherapy (2).

#### **CD80 Antibody [12D9] - 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.