

# Anti-CD80 (B7-1) Antibody

Mouse Monoclonal Antibody

Catalog # AH13620

## Product Information

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Application	IF, FC, E
Primary Accession	<a href="#">P33681</a>
Other Accession	<a href="#">838</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	C80/1608
Calculated MW	33048

## Additional Information

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Gene ID	941
Other Names	Activation B7-1 antigen; B lymphocyte activation antigen B7; B7; B7-1; BB1; CD28 antigen ligand 1; CD28LG; CD28LG1; CD80; Costimulatory factor CD80; CTLA-4 counter-receptor B7.1; LAB7; T-lymphocyte activation antigen CD80
Application Note	ELISA (For coating, order Ab without BSA); ,Immunofluorescence (1-2ug/ml); ,Flow Cytometry (0.5-1ug/million cells);,Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-CD80 (B7-1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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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="#">38467718</a> ). 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

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T cell proliferation and lymphokine production are triggered by occupation of the TCR by antigen, followed by a costimulatory signal that is delivered by a ligand expressed on antigen presenting cells. The B7-related cell surface proteins CD80 (B7-1) and CD86 (B7-2) are expressed on antigen presenting cells bind the homologous T cell receptors CTLA-4 (cytotoxic T lymphocyte-associated protein-4) and CD28 and trigger costimulatory signals for optimal T cell activation. CTLA-4 shares 31% overall amino acid identity with CD28 and it has been proposed that CD28 and CTLA-4 are functionally redundant. SLAM is a novel receptor on T cells that, when engaged, potentiates T cell expansion in a CD28-independent manner. B7, also designated BB1, is another ligand or counter receptor for CD28 and CTLA-4 that is expressed on the antigen-presenting cell.

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