

## Anti-B7-1/CD80 Antibody

**Catalog # ABO10689** 

#### **Specification**

## Anti-B7-1/CD80 Antibody - Product Information

Application WB
Primary Accession P33681
Host 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.

# Anti-B7-1/CD80 Antibody - 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 MW KDa

# **Application Details**

Western blot, 0.1-0.5 μg/ml, Human<br>

### **Subcellular Localization**

Membrane; Single-pass type I membrane protein.

# **Tissue Specificity**

Expressed on activated B-cells, macrophages and dendritic cells.

#### **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.

# **Anti-B7-1/CD80 Antibody - Protein Information**

Name CD80

Synonyms CD28LG1, 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 href="http://www.uniprot.org/citations/12121659" target=" blank">12121659</a>). Also acts as a regulator of PDL1/PDCD1 interactions to limit excess engagement of PDL1 and its inhibitory role in immune responses (PubMed:<a href="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

## Anti-B7-1/CD80 Antibody - Protocols

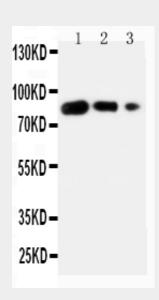
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation



- Flow Cytomety
- Cell Culture

# Anti-B7-1/CD80 Antibody - 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

# Anti-B7-1/CD80 Antibody - 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.