

**CD80 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1281a****Specification**

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**CD80 Antibody - Product Information**

Application	IHC, IF, WB
Primary Accession	<a href="#">P33681</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	55kDa KDa

**Description**

The protein CD80 (Cluster of Differentiation 80) is a molecule found on activated B cells and monocytes which provides a costimulatory signal necessary for T cell activation and survival. It is also known as B7.1. Its principal mode of action is by binding to CD28. Along with CD86, these molecules provide the necessary stimuli to prime T cells against antigens presented by antigen-presenting cells. CD80 and CD86 also bind to CTLA-4, a cell surface molecule expressed on activated T cells. Interactions between CD80 or CD86 with CTLA-4 decrease the response of T cells. Mouse research by scientists at Emory University showed that estrogen-related bone loss is linked to recently discovered pathways involving various proteins, such as CD80 and other functions. In a nutshell, reactive oxygen stimulates dendritic cells, which activate other immune cells to up-regulate production of CD80, the molecule co-responsible for T cell activation. "When this pathway is activated, it leads to increased T cell TNF production and ultimately to bone loss." In turn, T cells produce a protein, Tumor Necrosis Factor, which increases the formation of osteoclasts in rodents and humans. Osteoclasts cause minerals to be released from the bone, so that calcium is taken into the bloodstream to be used for other functions of the body. Osteoclast differentiation is inhibited by osteoprotegerin; Estrogen stimulates osteoprotegerin production.

**Immunogen**

Purified recombinant fragment of CD80 expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**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

**Dilution**

IHC~~1/200 - 1/1000

IF~~1/200 - 1/1000

WB~~1:500~~2000

### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

### Precautions

CD80 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## CD80 Antibody - Protein Information

**Name** CD80

**Synonyms** CD28LG, CD28LG1, LAB7

### Function

Involved in the costimulatory signal essential for T- lymphocyte activation. T-cell proliferation and cytokine production is induced by the binding of CD28, binding to CTLA-4 has opposite effects and inhibits T-cell activation.

### Cellular Location

Membrane; Single-pass type I membrane protein.

### Tissue Location

Expressed on activated B-cells, macrophages and dendritic cells

## 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 Cytometry](#)
- [Cell Culture](#)

## CD80 Antibody - Images

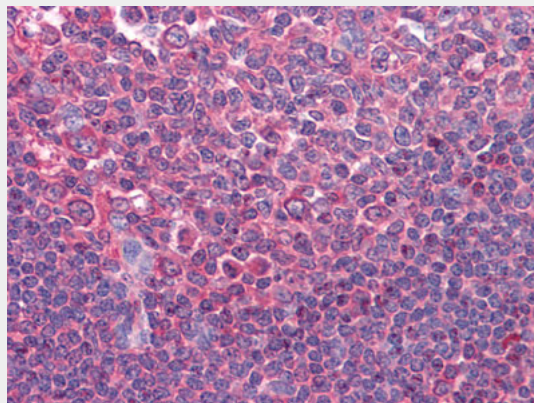


Figure 1: Immunohistochemical analysis of paraffin-embedded human Tonsil tissues using anti-CD80 mAb

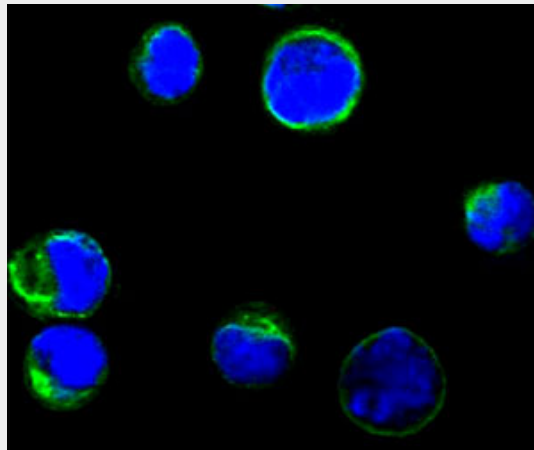


Figure 2: Confocal immunofluorescence analysis of BCBL-1 cells using anti-CD80 monoclonal antibody (green), showing membrane localization. Blue: DRAQ5 fluorescent DNA dye.

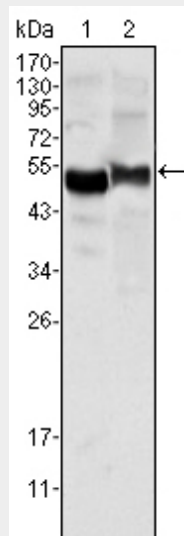


Figure 1: Western blot analysis using AAT mouse mAb against human plasma (1) and NIH/3T3 cell lysate (2).

### CD80 Antibody - References

1. Transplant Proc. 2008 Oct;40(8):2729-33.
2. Nat Med. 2007 Dec;13(12):1440-9.