

Product Name: CD80 Mouse Monoclonal Antibody**Catalog #: AMM80734**

For research use only.

Summary

Description	Mouse monoclonal Antibody
Host	Mouse
Application	IHC,ICC,ELISA
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Monoclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Purified antibody in PBS with 0.05% sodium azide.
Purification	Affinity Purification

Application

Dilution Ratio	IHC 1:200-1:1000,ICC 1:200-1:1000,ELISA 1:5000-1:20000
Molecular Weight	55kDa

Antigen Information

Gene Name	CD80
Alternative Names	CD28LG; LAB7; B7.1
Gene ID	941.0
SwissProt ID	P33681
Immunogen	Purified recombinant fragment of CD80 expressed in E. Coli.

Background

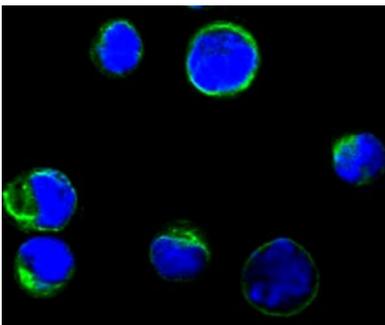
The protein CD80 (Cluster of Differentiation 80) is a molecule found on activated B cells and monocytes which provides a costimulatory signal necessary for T cell activation and survival. It is also known as B7.1. Its principal mode of action is by binding to CD28. Along with CD86, these molecules provide 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.

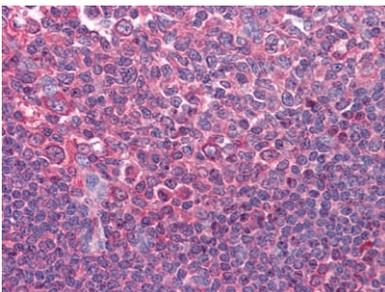
Research Area

TGF-beta signaling pathway

Image Data



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



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