

CD80 Monoclonal Antibody

Description

Product type	Antibody
Code	BT-MCA2947
Host	Mouse
Isotype	Mouse IgG1
Size	100µL, 50µL
Immunogen	Purified recombinant fragment of CD80 expressed in E. Coli.
Mol wt	55kDa
Species reactivity	Human
Clonality	Monoclonal
Recommended application	IHC,ICC
Concentration	N/A
Full name	N/A
Synonyms	CD28LG;LAB7;B7.1

This product is for research use only, not for use in human, therapeutic or diagnostic procedure.

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.

Recommended Dilution

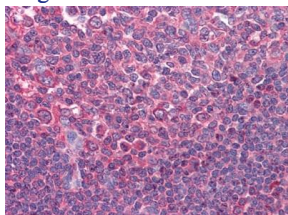
IHC-p: 1:200 - 1:1000

ICC: 1:200 - 1:1000

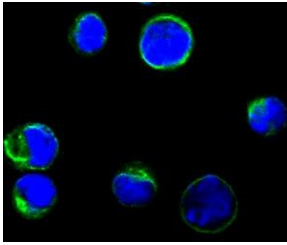
ELISA: 1:10000

Not yet tested in other applications.

Images



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



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

Storage

Store at 4°C short term. Aliquot and store at -20°C long term.

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