

PRODUCT INFORMATION SHEET

Mouse Monoclonal Antibody to CD80

Format: PURE RUO REF IQP-1286P Volume: 0.1ml

Description

Clone	2A2
Isotype	Mouse IgG1
Specificity	CD80
Alternative names	CD28LG; LAB7; B7.1
Species	Human
Immunogen	Purified recombinant fragment of CD80 expressed in E. Coli.
Mw	55kDa
Format	Ascitic fluid containing 0.03% sodium azide.

Summary 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.

Applications Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. ELISA: Propose dilution 1/10000. Not yet tested in other applications. Determining optimal working dilutions by titration test.

Limitations

1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC and CyQ. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion. IQ Products has not characterized the effect of the presence of therapeutic antibodies on the performance of this reagent.
3. Reagents can be used in different combinations, therefore laboratories need to become familiar performance characteristics of each antibody in relation with the combined markers in normal and abnormal samples.
4. Reagent data performance is based on EDTA-treated blood. Reagent performance can be affected by the use of other anticoagulants.



Handling and Storage

Antibodies are supplied in 0.01 M sodium phosphate, 0.15 M NaCl; pH 7.3, 0.03% sodiumazide (NaN₃) or as ascetic fluid containing 0.03% sodiumazide. Store the vials at 2-8 °C for a maximum of 2 weeks and store at -20°C for longer term storage. Monoclonal antibodies should be protected from prolonged exposure to light when conjugated with fluorochromes. Reagents are stable for the period shown on the vial label when stored properly.

Warranty

Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. IQ Products is not liable for property damage, personal injury, or economic loss caused by the product.

Characterization

To ensure consistently high-quality reagents, each batch of monoclonal antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

Warning

All products contain sodiumazide. This chemical is poisonous and hazardous. Handling should be done by trained staff only.

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



REF



RUO

LOT



EC/REP



Consult instructions for use

Catalogue number

Sufficient for

Caution, consult accompanying document

Keep away from (sun)light

Biological risks

Temperature limitation (°C)

For Research Use Only

Batch code

Use by yyyy-mm-dd

Manufacturer

Authorized Representative in the European Community

Conformité Européenne (European Conformity)

		Label - tandem	Ex -max (nm)	Em -max (nm)
P	PURE	purified material	-	-
F	FITC	FITC	488	519
R	R-PE	PE	488, 532	578
C	CyQ	PE-Cy5.18	488, 532	667
A	APC		595, 633, 635, 647	660
PC	PerCP		488, 532	678
PCC	PerCP-Cy5.5		488, 532	695



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