

mAbMods™ Anti-Mouse CD20 [Clone 18B12]

Recombinant Monoclonal Antibody for *in vivo* Use

Product Information

Product No.:	C1043
Clone:	18B12
Isotype:	Mouse Mouse IgG2a k
Storage:	Sterile 2-8°C

Product Description

Specificity:

18B12 activity is directed against murine CD20.

Antigen Distribution:

CD20 is a general B cell marker expressed by most normal B cells in all stages of their development and by most B cell malignancies.

Background:

This anti-CD20 antibody is a recombinant chimeric version of the original clone 18B12 antibody. The variable domain sequences are identical to the original clone 18B12; however, the constant region sequences have been switched from mouse IgG1 to mouse IgG2a.

CD20 is a phosphoprotein belonging to the MS4A family, with a size of 33-37 kD. It is primarily found on B cells, including malignant B cells. This protein serves as a target, for therapies that aim to deplete B cells using antibodies¹⁻⁴. CD20 works alongside surface IgM and plays a role in calcium conductance, cell cycle progression, and B cell growth^{5,6}. Many B cell malignancies exhibit levels of CD20, which remain on the cell surface after treatment with monoclonal antibodies. This makes it an effective target for antibody-based treatments⁷.

Although CD20 is mainly associated with B cells it has also been observed on a subset of T lymphocytes and follicular dendritic cells. However, its function in these cell types is not yet fully understood. CD20-positive T cells have been detected in conditions like autoimmune diseases, cancers, and infections^{8,9}.

Clone 18B12 is commonly used in research for studying B cell biology and immune responses. Researchers utilize this antibody for applications like flow cytometry analysis, immunohistochemistry studies as well as in vivo investigations using mouse models. By employing this antibody variant scientists have made progress in understanding the role of CD20, in autoimmune diseases, lymphomas, and other disorders related to B cell dysfunction¹⁰⁻¹⁴.

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

Product Datasheet

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Known Reactivity Species:

Mouse

Format:

Purified No Carrier Protein

Immunogen:

Mouse CD20 transfected cells

Formulation

This recombinant monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% by SDS Page, ≥95% monomer by analytical SEC

Endotoxin

<0.5 EU/mg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles.

Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Pathogen Testing

To protect mouse colonies from infection by pathogens and to assure that experimental preclinical data is not affected by such pathogens, all of Leinco's recombinant antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Other Applications Reported in Literature:

B,
FA,
in vivo,
WB,
IHC

Country of Origin

USA



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References

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