

Human CD20 Antibody (Ofatumumab)

Purified No Carrier Protein

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.: C3170

Clone: OMB-157

Isotype: Human IgG1κ

Storage: Sterile 2-8°C

Product Description

Specificity:

This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Ofatumumab. OMB-157 binds to a distinct epitope on the CD20 molecule, inducing potent B-cell lysis and depletion.

Antigen Distribution:

CD20 is primarily expressed on the surface of B lymphocytes, including both normal and malignant B cells.

Background:

CD20 is a transmembrane protein that is prominently present on the surface of B-cells from the early to mature stages, but notably absent on hematopoietic stem cells, pro-B cells, or plasma cells. Its significance lies in its role in B-cell functions such as activation and differentiation. It is a key target for monoclonal antibodies used in the treatment of B-cell-related diseases and autoimmune conditions. Monoclonal antibodies targeting CD20 have been widely used to treat B-cell lymphomas, leukemias, and autoimmune diseases like rheumatoid arthritis and systemic lupus erythematosus. These antibodies work by selectively targeting and depleting B-cells that express CD20, thereby modulating the immune response and reducing inflammation. This targeted approach has shown promising results in managing various B-cell disorders and has significantly improved the prognosis for patients with these conditions^{1,2}.

Ofatumumab, also known as OMB 157, is an anti-CD20 monoclonal antibody specifically developed to treat relapsing multiple sclerosis (RMS). Administered through subcutaneous injection, this medication functions by selectively binding to the CD20 molecule on B cells, inducing their destruction and subsequent reduction in number. Clinical studies have demonstrated the potential of ofatumumab in reducing disease activity in individuals with relapsing multiple sclerosis, highlighting its promise as a therapeutic option in the management of this condition^{3,4}.

Known Reactivity Species:

Human

Expression Host:

HEK-293 Cells

Format:

Purified No Carrier Protein

Formulation

This biosimilar 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

≤ 1.0 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

Recombinant biosimilar antibodies are manufactured in an animal free facility using only *in vitro* protein free 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 biosimilar antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Other Applications Reported in Literature:

Apoptosis Assays,

Binding Assays,

ELISA,

FA,

FC,

IF,

WB

Country of Origin

USA

References

1. Dabkowska A, Domka K, Firczuk M. Front Immunol. 2024;15:1363102
2. Shan D, Ledbetter JA, Press OW. Blood. 1998;91(5):1644-1652.
3. Sorensen PS, Lisby S, Grove R, et al. Neurology. 2014;82(7):573-581.
4. Hauser SL, Kappos L, Bar-Or A, et al. Neurol Ther. 2023;12(5):1491-1515.
5. In situ quantitative bioanalysis of monomethyl auristatin E-conjugated antibody-drug conjugates by flow cytometry - PubMed. Accessed August 11, 2024. <https://pubmed.ncbi.nlm.nih.gov/29727724/>
6. Recombinant Human Anti-CD20 Antibody (Ofatumumab) - Creative Biolabs. Accessed August 18, 2024. <https://www.creativebiolabs.net/Anti-CD20-Antibody-Ofatumumab-58330.htm>