Technical Data Sheet

RecombiMAb anti-mouse CD20

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**CP062**
Clone:	**MB20-11-CP062**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	RecombiMAb mouse IgG2a isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Mouse CD20-GFP transfected 300.19 cells
Reported Applications:	Western Blot Flow Cytometry *in vivo* B cell depletion *Reported for the original MB20-11 antibody. For information on *in vivo* applications, please contact technicalservice@bioxcell.com
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	<1EU/mg (<0.001EU/μg) Determined by LAL gel clotting assay
Purity:	>95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from HEK293 cell supernatant in an animal-free facility
Purification:	Protein G
Aggregation:	<5% Determined by SEC
RRID:	
Molecular Weight:	150 kDa

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

The MB20-11-CP062 monoclonal antibody is a recombinant, chimeric version of the original MB20-11 antibody. The recombinant MB20-11-CP062 antibody targets murine CD20. CD20 is expressed on the surface of immature and mature B cells and their malignant counterparts. MB20-11 rapidly and effectively depletes B cells via antibody-dependent cellular

cytotoxicity (ADCC) through engaging Fcγ receptors on monocytes and other effector cells. Isotype-specific interactions contribute significantly to the effectiveness of CD20 mAbs in vivo, with IgG2a/c mAbs having greater potency than IgG1 or IgG2b. IgG2a and IgG2c isotypes are indistinguishable in their specificities to murine FcγR. The recombinant MB20-11-CP062 variable domain sequences are identical to clone MB20-11, but the constant region has been converted from mouse IgG2c to mouse IgG2a. Mouse strains such as C57Bl/6, C57Bl/10, SJL, and NOD mice possesses the Igh1-b allele resulting in only the expression of IgG2c. However, mouse strains such as BALB/c and Swiss Webster mice possess the Igh1-a allele which results in only the expression of IgG2a. It is important to consider matching the Ig-haplotype of the receiving mice to the isotype of the injected antibody to avoid eliciting an undesired immune response. Additionally, the highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. B cell depleting antibodies are valuable tools for studying B cell biology and developing therapies for autoimmune diseases and malignancies. References: 1: Uchida, Junji et al. “The innate mononuclear phagocyte network depletes B lymphocytes through Fc receptor-dependent mechanisms during anti-CD20 antibody immunotherapy.” The Journal of experimental medicine vol. 199,12 (2004): 1659-69. doi:10.1084/jem.20040119 2: Xiu, Yan et al. “B lymphocyte depletion by CD20 monoclonal antibody prevents diabetes in nonobese diabetic mice despite isotype-specific differences in Fc gamma R effector functions.” Journal of immunology (Baltimore, Md. : 1950) vol. 180,5 (2008): 2863-75. doi:10.4049/jimmunol.180.5.2863 3: Hamaguchi, Yasuhito et al. “Antibody isotype-specific engagement of Fcgamma receptors regulates B lymphocyte depletion during CD20 immunotherapy.” The Journal of experimental medicine vol. 203,3 (2006): 743-53. doi:10.1084/jem.20052283 4: Zhang, Zhiping et al. “Possible allelic structure of IgG2a and IgG2c in mice.” Molecular immunology vol. 50,3 (2012): 169-71. doi:10.1016/j.molimm.2011.11.006

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/cp062?bxcs=9k1b3a#tab_references or scan the QR code below.

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