Technical Data Sheet

InVivoPlus 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:	**BP0356**
Clone:	**MB20-11**
Isotype:	Mouse IgG2c, κ
Recommended Isotype Control(s):	InVivoPlus mouse IgG2c isotype control, anti-dengue virus
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Mouse CD20-GFP transfected 300.19 cells
Reported Applications:	*in vivo* B cell depletion Western blot
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 cell culture supernatant in an animal-free facility
Purification:	Protein A
Aggregation:	<5% Determined by SEC
RRID:	AB_2894775
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 monoclonal antibody reacts with mouse CD20. CD20 is a B cell-specific 33-37 kDa transmembrane protein which is also known as B-lymphocyte antigen, B1, and Bp35. CD20 is expressed on the surface of immature and mature B cells and their malignant counterparts. CD20 plays roles in intracellular calcium regulation and B cell activation and is critical for an optimal B cell immune response against T-independent antigens. B cell depleting antibodies are valuable tools for studying B cell biology and developing therapies for autoimmune diseases and malignancies. The MB20-11 antibody 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. 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. Bio X Cell is pleased to also offer recombinant MB20-11-CP062. This monoclonal antibody has variable domain sequences identical to MB20-11 but the constant region has been converted from mouse IgG2c to mouse IgG2a for use in mice with the Igh-1a allele. Additionally, the highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. 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 Fc gamma 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

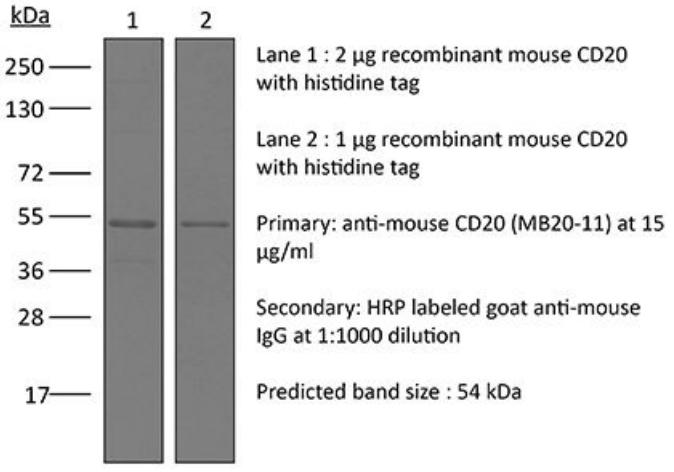
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/bp0356?bxcs=9k1b3a#tab_references or scan the QR code below.

Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail technicalservice@bioxcell.com.



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