



Rat Anti-Mouse CD20 Monoclonal antibody, clone AISB12 (CABT-L4530)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview

The AISB12 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 plays roles in intracellular calcium regulation and B cell activation and is critical for an optimal B cell immune response against T-independent antigens. CD20 is first expressed after the induction of CD19 together with IgM during the pre-B to immature B cell transition in the bone marrow. Its expression then increases during maturation with almost all mature B cells expressing some level of CD20. However, CD20 is not expressed by plasma blasts or plasma cells. CD20 is expressed by most B cell neoplasms, and is useful in diagnosing B cell lymphomas and leukemia. Many anti-CD20 monoclonal antibodies are currently being used to successfully treat leukemia, lymphomas, and various autoimmune diseases. The AISB12 monoclonal antibody has been reported in the literature to deplete endogenous CD20+ B cells *in vivo*. However, multiple reports of low B cell depletion efficiency have also been reported.

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| Target | Mouse CD20 |
| Immunogen | Full length mouse CD20 protein |
| Isotype | IgG2a, κ |
| Source/Host | Rat |
| Species Reactivity | Mouse |
| Clone | AISB12 |
| Purification | Protein G purified. Purity>95%. Determined by SDS-PAGE |
| Conjugate | Functional Grade |

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| Applications | FC, WB |
| Molecular Weight | 150 kDa |
| Format | 0.2 μ m filtration liquid. Purified from tissue culture supernatant in an animal free facility |
| Concentration | Lot specific |
| Size | 5 mg |
| Buffer | PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] |
| | Endotoxin level: <2EU/mg (<0.002EU/ μ g). Determined by LAL gel clotting assay |
| | Related dilution buffer: CABT-LB04 |
| Preservative | None |
| Storage | The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze. |
| Ship | Wet ice |

BACKGROUND

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| Introduction | B-lymphocyte antigen CD20 or CD20 is an activated-glycosylated phosphoprotein expressed on the surface of all B-cells beginning at the pro-B phase (CD45R+, CD117+) and progressively increasing in concentration until maturity. In humans CD20 is encoded by the MS4A1 gene. This gene encodes a member of the membrane-spanning 4A gene family. Members of this nascent protein family are characterized by common structural features and similar intron/exon splice boundaries and display unique expression patterns among hematopoietic cells and nonlymphoid tissues. This gene encodes a B-lymphocyte surface molecule that plays a role in the development and differentiation of B-cells into plasma cells. This family member is localized to 11q12, among a cluster of family members. Alternative splicing of this gene results in two transcript variants that encode the same protein. |
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| Keywords | MS4A1;B1;Bp35;CD20;CVID5;LEU-16;MS4A2;S7 |
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GENE INFORMATION

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|------------------------|---|
| Official Symbol | CD20 |
| Synonyms | MS4A1; B1; Bp35; CD20; CVID5; LEU-16; MS4A2; S7 |
| References | Ahmed, K. A., et al. (2012). "Direct in vivo evidence of CD4+ T cell requirement for CTL response and memory via pMHC-I targeting and CD40L signaling." J Leukoc Biol 92(2): 289- |

