abcam

# ab25177

# Anti-CD19 antibody [MB19-1]

Lab Essentials

## Key facts

| | |
|---|---|
| **Isotype** | IgA |
| **Host species** | Mouse |
| **Storage buffer** | Preservative: 0.02% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | MB19-1 |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Diafiltration. |

## Reactivity data

## Flow Cyt

### Tested

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|---|---|
| **Species** | Mouse |
| **Dilution info** | 1-5 µg/mL |
| **Notes** | ab37322 - Mouse monoclonal IgA, is suitable for use as an isotype control with this antibody. |

## Target data

See full target information Cd19

| | |
|---|---|
| **Function** | Functions as a coreceptor for the B-cell antigen receptor complex (BCR) on B-lymphocytes. Decreases the threshold for activation of downstream signaling pathways and for triggering B-cell responses to antigens (By similarity). Activates signaling pathways that lead to the activation of phosphatidylinositol 3-kinase and the mobilization of intracellular Ca(2+) stores (PubMed:12387743, PubMed:20101619, PubMed:9382888). Is not required for early steps during B cell differentiation in the blood marrow (PubMed:7542548, PubMed:7543183, PubMed:9317126). Required for normal differentiation of B-1 cells (PubMed:12387743, PubMed:7542548, PubMed:7543183). Required for normal B cell differentiation and proliferation in response to antigen challenges (PubMed:12387743, PubMed:7542548, PubMed:9317126). Required for normal levels of serum immunoglobulins, and for production of high-affinity antibodies in response to antigen challenge (PubMed:12387743, PubMed:7542548, PubMed:7543183). |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**Want a custom formulation?**
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | CD19 is a transmembrane protein also known as B4 or B-lymphocyte antigen CD19 with an approximate molecular weight of 95 kDa. It is expressed on the surface of B cells throughout their development from pro-B cells to mature B cells. CD19 functions mechanically as a coreceptor enhancing the sensitivity of B cell receptor (BCR) signaling. This protein plays a significant role in promoting the activation and proliferation of B cells by lowering the threshold for antigen receptor engagement. |
| **Biological function summary** | CD19 acts as an essential player in B cell signaling. CD19 integrates signals from the BCR with other coreceptors acting as a signaling hub. It participates in forming a signaling complex that includes proteins like CD21 and CD81 which further amplifies BCR-mediated signaling. This complex plays a critical role in B cell activation differentiation and survival ensuring that immune responses are efficiently mounted against pathogens. |
| **Pathways** | The CD19 protein fits into key immune response pathways such as the BCR signaling pathway and the PI3K-Akt signaling pathway. CD19 collaborates with other proteins like CD21 CD81 and PI3K within these pathways. Its interaction in the PI3K-Akt pathway for instance supports critical processes including B cell activation and homeostasis contributing to the adaptive immune response. |
| **Associated diseases and disorders** | CD19 is connected to B cell malignancies and autoimmune diseases. B cell acute lymphoblastic leukemia (ALL) often shows aberrant CD19 expression making it a valuable target for therapeutic interventions like anti-CD19 monoclonal antibodies. Additionally overexpression or mutations of CD19 may contribute to autoimmune diseases by disrupting normal B cell regulation. CD19's connection with proteins like CD22 and CD20 in these pathological contexts highlights its relevance in developing targeted therapies. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

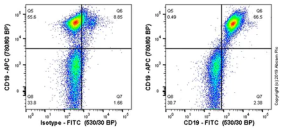
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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## 1 product image



### Flow Cytometry - Anti-CD19 antibody [MB19-1] (ab25177)

CD19 Flow Cytometry staining using mouse Anti-CD19 antibody

C57BL6 mouse splenocytes were incubated with Mouse IgA kappa monoclonal [S107] (ab37322) (left) or anti-CD19 [MB19-1] antibody (ab25177) (right) at 1ug/ml for 30 min at 4+°C. The secondary antibody Goat Anti-Mouse IgA alpha chain (FITC) was used at 1/200 dilution for 30 min at 4+°C. The cells were simultaneously stained with anti-CD19 APC (10ug/ml).
Acquisition of >30,000 total events were collected. Gating strategy - live lymphocytes

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.