



Monoclonal Anti-human Semaphorin 4B Antibody

ORDERING INFORMATION

Catalog Number: MAB5485

Clone: 561416

Lot Number: CDAA01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

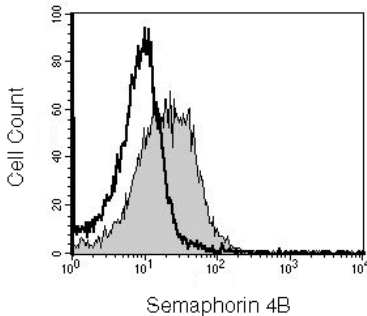
Specificity: human Semaphorin 4B

Immunogen: NS0-derived rhSemaphorin 4B

Ig class: mouse IgG_{2b}

Recommended Application:
Flow cytometry

Other Application:
Direct ELISA



THP-1 cells were stained with anti-Semaphorin 4B (Catalog # MAB5485, filled histogram) or isotype control (Catalog # MAB0041, open histogram) followed by APC-conjugated anti-mouse antibody (Catalog # F0101B).

Background

Semaphorin 4B (Sema4B; also SemaC) is a 95 - 100 kDa, class IV member of the semaphorin family of proteins. It is expressed in neurons, and following PSD-95 induced clustering, participates in the formation or functioning of glutamatergic synapses. Mature human Semaphorin 4B is a type I transmembrane glycoprotein that contains one Sema domain (aa 65 - 502), a PSI region (aa 520 - 574), and an Ig-like C2-type domain (aa 599 - 658) in its extracellular domain. There is one potential soluble splice variant that shows a 29 aa substitution for aa 707 - 832. Over aa 39 - 712, human Semaphorin 4B shares 86% aa identity with mouse Semaphorin 4B.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human Semaphorin 4B (rhSemaphorin 4B; aa 39 - 712; Accession # Q9NPR2). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rhSemaphorin 4B in direct ELISAs. In this format, this antibody shows no cross-reactivity with rmSemaphorin 4B.

Applications

Flow cytometry - This antibody was tested for flow cytometry using THP-1 cells (Li, Z. *et al.* (2007) Anal. NY Acad. Sci **1106**:95). Dilute this antibody to 25 µg/mL and add 10 µL of the diluted solution to 1 - 2.5 x 10⁵ cells in a total reaction volume not exceeding 200 µL. The binding of unlabeled antibodies may be visualized by adding a secondary developing reagent such as anti-mouse IgG conjugated to a fluorochrome. Between steps, wash cells in Flow Cytometry Staining Buffer (Catalog # FC001) or equivalent.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human Semaphorin 4B. The detection limit for rhSemaphorin 4B is approximately 1 ng/well.

Optimal dilutions should be determined by each laboratory for each application.

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