

Anti-Semaphorin 3B/SEMA3B Antibody Picoband™ (monoclonal, 9C4F7)

Catalog # ABO15117

Product Information

Application	WB, IF, ICC, FC
Primary Accession	Q13214
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Semaphorin 3B/SEMA3B Antibody Picoband™ (monoclonal, 9C4F7) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Additional Information

Gene ID	7869
Other Names	Semaphorin-3B, Sema A(V), Semaphorin-V, Sema V, SEMA3B, SEMA5, SEMAA
Calculated MW	83122
Application Details	Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human Flow Cytometry, 1-3 µg/1x10 ⁶ cells, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Clone Names Immunogen	Clone: 9C4F7 E.coli-derived human Semaphorin 3B/SEMA3B recombinant protein (Position: Y55-R624).
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	SEMA3B
Synonyms	SEMA5, SEMAA
Function	Inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons.
Cellular Location	Secreted. Endoplasmic reticulum. Note=Accumulates in the endoplasmic reticulum
Tissue Location	Expressed abundantly but differentially in a variety of neural and nonneural tissues

Background

Semaphorin-3B is a protein that in humans is encoded by the SEMA3B gene. It is mapped to 3p21.31. The semaphorin/collapsin family of molecules plays a critical role in the guidance of growth cones during neuronal development. The secreted protein encoded by this gene family member is important in axonal guidance and has been shown to act as a tumor suppressor by inducing apoptosis.

Images

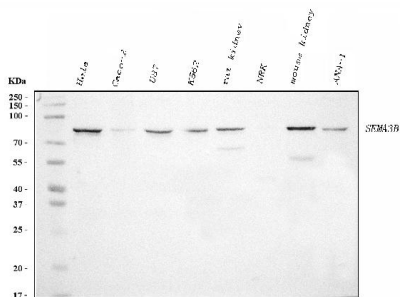


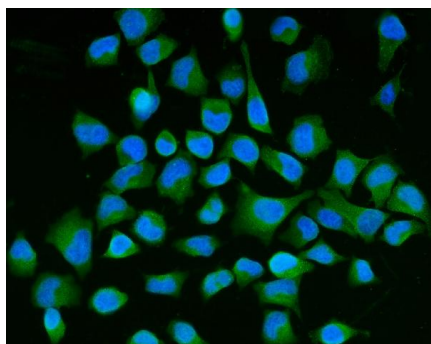
Figure 1. Western blot analysis of Semaphorin 3B/SEMA3B using anti-Semaphorin 3B/SEMA3B antibody (M06559).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- Lane 1: human Hela whole cell lysates,
- Lane 2: human CACO-2 whole cell lysates,
- Lane 3: human U87 whole cell lysates,
- Lane 4: human K562 whole cell lysates,
- Lane 5: rat kidney tissue lysates,
- Lane 6: rat NRK whole cell lysates,
- Lane 7: mouse kidney tissue lysates,
- Lane 8: mouse ANA-1 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Semaphorin 3B/SEMA3B antigen affinity purified monoclonal antibody (Catalog # M06559) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Semaphorin 3B/SEMA3B at approximately 83 kDa. The expected band size for Semaphorin 3B/SEMA3B is at 83 kDa.

Figure 2. IF analysis of Semaphorin 3B/SEMA3B using anti-Semaphorin 3B/SEMA3B antibody (M06559). Semaphorin 3B/SEMA3B was detected in an immunocytochemical section of Hela cells. Enzyme



antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-Semaphorin 3B/SEMA3B Antibody (M06559) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

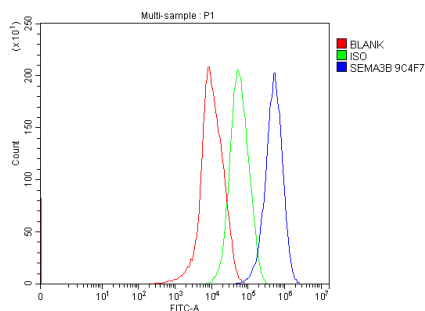


Figure 3. Flow Cytometry analysis of HepG2 cells using anti-Semaphorin 3B/SEMA3B antibody (M06559). Overlay histogram showing HepG2 cells stained with M06559 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Semaphorin 3B/SEMA3B Antibody (M06559, 1 µg/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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