

SEMA3B (L-20)-R: sc-21204-R

BACKGROUND

Semaphorins comprise a family of cell surface and secreted proteins that are conserved from insects to humans. Members of this family of proteins are approximately 750 amino acids in length (including signal sequences) and are defined by a conserved extracellular "semaphorin" domain of approximately 500 amino acids containing 14-16 cysteines, many blocks of conserved sequences and no obvious repeats. Secreted and cell-bound semaphorins chemically attract and repel the growth of neural axons, guiding the development of intricate networks of neural tissue. SEMA3B (semaphorin-3B), also known as SEMA5, SEMAV or LUCA-1, is a 749 amino acid secreted protein that belongs to the semaphorin family and specifically functions to inhibit axonal extension. SEMA3B contains one immunoglobulin-like (Ig-like) domain, one PSI domain and one semaphorin domain. Mutations in the gene encoding SEMA3B are often found in non-small cell lung cancer cells, suggesting that SEMA3B may function as a tumor suppressor.

CHROMOSOMAL LOCATION

Genetic locus: SEMA3B (human) mapping to 3p21.31; Sema3b (mouse) mapping to 9 F1.

SOURCE

SEMA3B (L-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SEMA3B of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21204 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SEMA3B (L-20)-R is recommended for detection of SEMA3B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SEMA3B (L-20)-R is also recommended for detection of SEMA3B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SEMA3B siRNA (h): sc-40934, SEMA3B siRNA (m): sc-40935, SEMA3B shRNA Plasmid (h): sc-40934-SH, SEMA3B shRNA Plasmid (m): sc-40935-SH, SEMA3B shRNA (h) Lentiviral Particles: sc-40934-V and SEMA3B shRNA (m) Lentiviral Particles: sc-40935-V.

Molecular Weight of SEMA3B active form: 83 kDa.

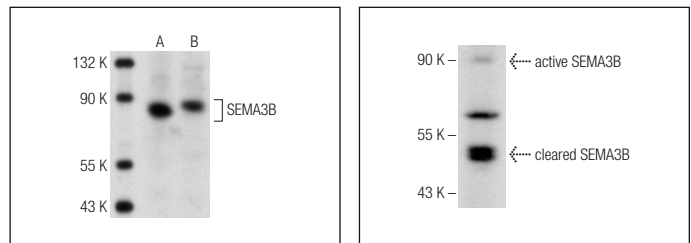
Molecular Weight of SEMA3B cleaved form: 50 kDa.

Positive Controls: mouse brain extract: sc-2253, rat adrenal gland extract: sc-364802 or rat placenta extract: sc-364808.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SEMA3B (L-20)-R: sc-21204-R. Western blot analysis of SEMA3B expression in rat adrenal gland (A) and rat placenta (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Sabag, A.D., et al. 2012. Semaphorin-3D and semaphorin-3E inhibit the development of tumors from glioblastoma cells implanted in the cortex of the brain. *PLoS ONE* 7: e42912.
- Mucha, J., et al. 2014. MDSCs mediate angiogenesis and predispose canine mammary tumor cells for metastasis via IL-28/IL-28RA (IFN-λ) signaling. *PLoS ONE* 9: e103249.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **SEMA (A-12): sc-74554**, our highly recommended monoclonal alternative to SEMA3B (L-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SEMA (A-12): sc-74554**.