

SEMA4C (37): sc-136445

BACKGROUND

Semaphorins are a family of cell surface and secreted proteins that are conserved from insects to humans. Members of this family are defined by a conserved extracellular sema domain of approximately 500 amino acids containing 14-16 cysteines, 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. SEMA4C (semaphorin-4C), also known as SEMAF, is an 833 amino acid single-pass type I membrane protein that contains one sema domain, one PSI domain and one Ig-like C2-type domain. Expressed in a variety of tissues, including lung, kidney and brain, SEMA4C interacts with GIPC and NCDN and is thought to play a role in the formation of neural networks during development.

REFERENCES

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- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604462. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ohoka, Y., et al. 2001. Semaphorin 4C, a transmembrane semaphorin, associates with a neurite-outgrowth-related protein, SFAP75. *Biochem. Biophys. Res. Commun.* 280: 237-243.
- Inagaki, S., et al. 2001. Sema4c, a transmembrane semaphorin, interacts with a post-synaptic density protein, PSD-95. *J. Biol. Chem.* 276: 9174-9181.

CHROMOSOMAL LOCATION

Genetic locus: SEMA4C (human) mapping to 2q11.2; Sema4c (mouse) mapping to 1 B.

SOURCE

SEMA4C (37) is a mouse monoclonal antibody raised against amino acids 400-510 of SEMA4C of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SEMA4C (37) is available conjugated to agarose (sc-136445 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136445 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

STORAGE

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

APPLICATIONS

SEMA4C (37) is recommended for detection of SEMA4C of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for SEMA4C siRNA (h): sc-94903, SEMA4C siRNA (m): sc-153334, SEMA4C shRNA Plasmid (h): sc-94903-SH, SEMA4C shRNA Plasmid (m): sc-153334-SH, SEMA4C shRNA (h) Lentiviral Particles: sc-94903-V and SEMA4C shRNA (m) Lentiviral Particles: sc-153334-V.

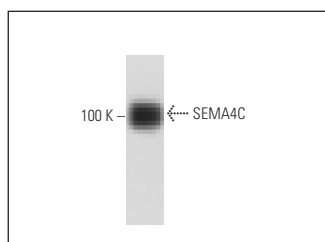
Molecular Weight of SEMA4C: 100 kDa.

Positive Controls: SW-13 cell lysate: sc-24778.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



SEMA4C (37): sc-136445. Western blot analysis of SEMA4C expression in SW-13 whole cell lysate.

SELECT PRODUCT CITATIONS

- Li, J., et al. 2015. MiR-138 inhibits cell proliferation and reverses epithelial-mesenchymal transition in non-small cell lung cancer cells by targeting GIT1 and SEMA4C. *J. Cell. Mol. Med.* 19: 2793-2805.
- Gurrapu, S., et al. 2018. Sema4C/PlexinB2 signaling controls breast cancer cell growth, hormonal dependence and tumorigenic potential. *Cell Death Differ.* 25: 1259-1275.
- Gurrapu, S., et al. 2019. Reverse signaling by semaphorin 4C elicits SMAD1/5- and ID1/3-dependent invasive reprogramming in cancer cells. *Sci. Signal.* 12: eaav2041.
- Smeester, B.A., et al. 2019. SEMA4C is a novel target to limit osteosarcoma growth, progression, and metastasis. *Oncogene* 39: 1049-1062.
- Yu, Z., et al. 2020. MiR-642 serves as a tumor suppressor in hepatocellular carcinoma by regulating SEMA4C and p38 MAPK signaling pathway. *Oncol. Lett.* 20: 74.

RESEARCH USE

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