

SEMA3D (H-51): sc-135265

BACKGROUND

Semaphorins are 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, 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. SEMA3D (semaphorin 3D), also known as coll-2 or Sema-Z2, is a 777 amino acid secreted protein that belongs to the semaphorin family and participates in axon-axon interactions and neural crest activity. SEMA3D binds neuropilin and is able to induce the collapse and paralysis of neuronal growth cones, as well as act to repel specific neuronal populations. SEMA3D contains one immunoglobulin-like (Ig-like) domain, one PSI domain and one Semaphorin domain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SEMA3D (human) mapping to 7q21.11; Sema3d (mouse) mapping to 5 A1.

RESEARCH USE

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

SOURCE

SEMA3D (H-51) is a rabbit polyclonal antibody raised against amino acids 560-610 mapping within an internal region of SEMA3D 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.

APPLICATIONS

SEMA3D (H-51) is recommended for detection of SEMA3D of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

SEMA3D (H-51) is also recommended for detection of SEMA3D in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SEMA3D siRNA (h): sc-62992, SEMA3D shRNA Plasmid (h): sc-62992-SH and SEMA3D shRNA (h) Lentiviral Particles: sc-62992-V.

Molecular Weight of SEMA3D: 90 kDa.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

STORAGE

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

PROTOCOLS

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


 MONOS
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Try **SEMA (A-12): sc-74554**, our highly recommended monoclonal alternative to SEMA3D (H-51). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SEMA (A-12): sc-74554**.