

# SEMA6A (S-18): sc-67964

## BACKGROUND

Semaphorins are a family of cell surface and secreted proteins involved in neural development that are conserved from insects to humans. Members of this family 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. The transmembrane semaphorins are characterized by an additional 80 amino acid transmembrane domain and an 80-110 amino acid cytoplasmic domain. SEMA6A, also known as SEMA VIA, is a single pass type-I transmembrane protein that exists as a homodimer or oligomer when active. It is expressed in undifferentiated embryonic stem cells, endodermal progenitors and adult brain. SEMA6A functions as a repellent for sympathetic ganglion axons and propagates this activity through its receptors, plexin-A2 and plexin-A4. SEMA6A may also inhibit growth factor- and tumor-induced angiogenesis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SEMA6A (human) mapping to 5q23.1; Sema6a (mouse) mapping to 18 C.

## SOURCE

SEMA6A (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of SEMA6A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67964 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SEMA6A (S-18) is recommended for detection of semaphorin 6A 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).

SEMA6A (S-18) is also recommended for detection of semaphorin-6A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SEMA6A siRNA (h): sc-63004, SEMA6A siRNA (m): sc-63005, SEMA6A shRNA Plasmid (h): sc-63004-SH, SEMA6A shRNA Plasmid (m): sc-63005-SH, SEMA6A shRNA (h) Lentiviral Particles: sc-63004-V and SEMA6A shRNA (m) Lentiviral Particles: sc-63005-V.

Molecular Weight (predicted) of SEMA6A: 114 kDa.

Molecular Weight (observed) of SEMA6A: 160-173 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

## RESEARCH USE

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



Try **SEMA (A-12): sc-74554** or **SEMA6A (B-3): sc-398302**, our highly recommended monoclonal alternatives to SEMA6A (S-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SEMA (A-12): sc-74554**.