

Semaphorin-3F (a.a. 746-762)

Cat. # SP3921

Host Rabbit Polyclonal

Size 100 µl

Background:

One family of inhibitory axon guidance molecules is the semaphorins. The semaphorins include secreted, transmembrane, and GPI-anchored extracellular molecules that have been implicated in neuron development, vascular disease, and tumor progression. There are eight classes of semaphorin genes, all of which are characterized by a conserved 500 amino acid, cystine-rich Sema domain. Semaphorin 3F (Sema-3F) is a class III secreted semaphorin that binds with high affinity to Neuropilin-2, and low affinity to Neuropilin-1. During peripheral and central nervous system development, Sema-3F has critical roles in axon guidance and dendrite outgrowth. Sema-3F has also been shown to inhibit angiogenesis by manipulating VEGFR function and decreasing blood vessel density. In cancers, Sema-3F induces a poorly vascularized, encapsulated, non-metastatic phenotype through chemorepulsion of endothelial cells in melanoma, while Sema-3F disrupts intercellular contacts of MCF7 breast cancer cells through delocalization of E-cadherin and β -catenin. Thus, Sema-3F may have important roles in axon guidance, angiogenesis, and tumor progression.

References

Kolk, S.M. et al. (2009) J Neurosci. 29(40):12542.

Tran, T.S. et al. (2009) Nature. 462(7276):1065.

Xiang, R.H. (1996) Genomics. 32(1):39.

Immunogen:

Semaphorin 3F synthetic peptide (coupled to carrier protein) corresponds to amino acids 746 to 762 in human Sema-3F. This sequence is highly conserved in rat and mouse Sema-3F, and has low homology to other semaphorin family members.

Applications:

WB 1:1000

ELISA 1:2000

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Related Products:

SX3925 Semaphorin-3F (a.a. 746-762) Peptide

SK6190 Sema-3A and NRP1/Plexin A1 Receptor Antibody Sampler Kit

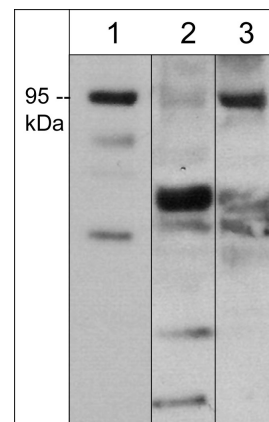
SK6240 Sema-4D and Plexin B1 Receptor Antibody Sampler Kit

SK6420 Semaphorin-3 and Neuropilin Antibody Sampler Kit

NM3911 Neuropilin-2 (MAM Domain) Mouse Monoclonal

NP2111 Neuropilin-1 (a1 CUB Domain) Rabbit Polyclonal

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Western blot analysis of Sema-3F expression in adult mouse brain (lane 1), kidney (lane 2), and liver (lane 3). The blot was probed with anti-Sema-3F (SP3921) at 1:1000.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C . Do not aliquot. Stable for 1 year.

Specificity:

The antibody detects a 95 kDa* protein corresponding to the apparent molecular mass of Sema-3F on SDS-PAGE immunoblots of adult mouse brain and liver.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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