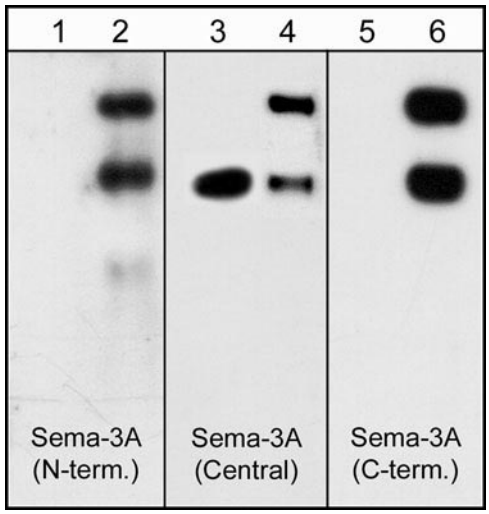
Semaphorin-3A (Central region)

Rabbit Polyclonal

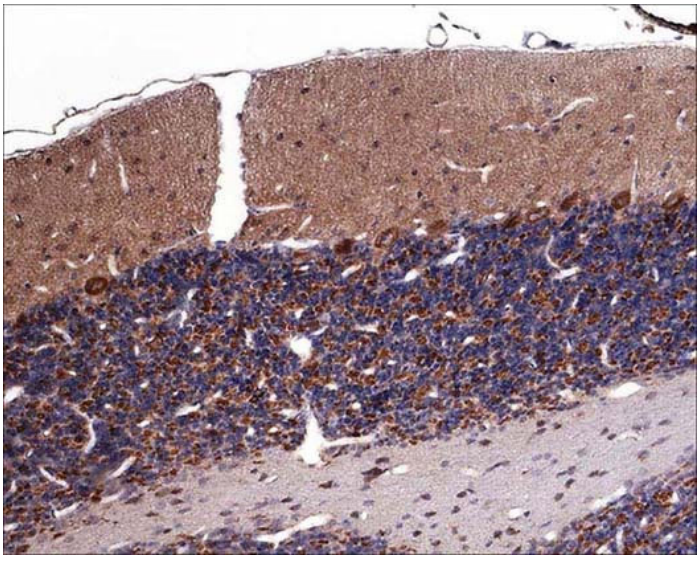
Cat. # SP1221
Size 100 µl

Background

One family of inhibitory axon guidance molecules is the semaphorins. The semaphorins include secreted, transmembrane, and GPI-anchored extracellular molecules that are involved in regulating axon guidance by inhibiting axons from growing toward incorrect targets. Semaphorin 3A (Sema3A) may play a particularly interesting role in limiting axon regeneration since it is expressed in meningeal fibroblasts that invade the injured spinal cord and surround the glial scar. In addition, the Sema3A co-receptors, Neuropilin-1 and Plexin-A1, are expressed on axons that regenerate up to the injured region, but do not cross this Sema3A-containing region. Thus, Sema3A and its co-receptors may have important roles in regulating axon guidance during neuronal development and after neuronal injury.



Western blots of neonatal rat brain (lanes 1, 3 & 5) and human recombinant Sema3A/Fc chimera (95/125 kDa) (lanes 2, 4 & 6). Blots were probed with anti-Sema3A (SP1401) (lanes 1 & 2), anti-Sema3A (SP1221) (lanes 3 & 4) and anti-Sema3A (SP1241) (lane 5 & 6). The antibodies recognize both the 95 kDa and 125 kDa forms of the recombinant Sema3A.



Formalin fixed, citric acid treated parafin sections of adult Rat cerebellum. Sections were probed with anti-Sema3A (SP1221) then anti-Rabbit:HRP before detection using DAB. (Images provided by Carl Hobbs and Dr. Pat Doherty at Wolfson Centre for Age-Related Diseases, King's College London).

Background References

Kolodkin, A.L. et al. (1993) Cell 75:1389.
Luo, Y. et al. (1993) Cell 75:217.
Pasterkamp, R.J. & Verhaagen, J. (2001) Brain Res Rev 35:36.

Product Citations

Pan, H. et al. (2009) Breast Can Res Treat. 118(1):197.
WB: MDA-MB-231, shRNA knockdown

Tang, X-Q. et al. (2007) J. Neurosci. 27(22):6068.
WB: rat E14 spinal cord

www.ecmbio.com
info@ecmbio.com
toll-free: 1-800-859-8202
telephone: 859-879-2075

Rev 9/19/2019

Semaphorin-3A (Central region)

Rabbit Polyclonal

Cat. # SP1221
Size 100 µl

Immunogen

Uniprot ID: Q14563

Semaphorin 3A synthetic peptide (coupled to carrier protein) corresponding to amino acids in the central region of human Sema3A. The sequence used is highly conserved in rat and mouse Sema3A, and has low homology to other semaphorin family members.

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. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
IHC	1:300
ICC	1:100

Species Reactivity

Hu, Rt, Ms

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, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody was affinity purified using Semaphorin 3A (Central region) peptide (without carrier). The antibody detects a 95kDa* protein corresponding to the apparent molecular mass of Sema3A on SDS-PAGE immunoblots of human recombinant Sema3A and neonatal rat brain lysates.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.
"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

SX1225 Semaphorin-3A (Central region) Blocking Peptide
SP1241 Semaphorin-3A (C-terminal) Rabbit Polyclonal
SP1401 Semaphorin-3A (N-terminal) Rabbit Polyclonal
SM1881 Semaphorin-4D (C-terminal region) Mouse Monoclonal
PP1301 Plexin A1 (Sema Domain) Rabbit Polyclonal
PP1841 Plexin B1 (C-terminal region) Rabbit Polyclonal

www.ecmbio.com
info@ecmbio.com
toll-free: 1-800-859-8202
telephone: 859-879-2075

Rev 9/19/2019