bio-techne®
R&D SYSTEMS

Human Semaphorin 4A Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4694S
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Semaphorin 4A in direct ELISAs and Western blots. In direct ELISAs, approximately 80% cross-reactivity with recombinant mouse Semaphorin 4A is observed, and less than 1% cross-reactivity with recombinant human (rh) Semaphorin 4B, rhSemaphori
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Semaphorin 4A Gly32-His683 Accession # Q9H3S1
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Sema4A (Semaphorin 4A; also Sema B) is a class IV member of the semaphorin family of proteins. It is expressed by dendritic cells, monocytes, T cells, B cells, astrocytes and oligodendrocytes, plus visceral smooth muscle and bronchial epithelial cells. It reportedly binds to Tim-2 and Plexin D1 and B1. In the immune system, it serves to activate naïve T cells and induce a Th1 phenotype. In the nervous system, it induces growth cone collapse in neurons. Mature human Sema4A is an 80 kDa (predicted) type I transmembrane glycoprotein that is 729 amino acids (aa) in length (aa 33-761). It contains a 651 aa extracellular region (aa 33-683) that is characterized by the presence of one Sema domain (aa 36-494), a PSI region (aa 496-528), and an Ig-like C2-type domain (aa 573-631). The 57 aa cytoplasmic region contains two potential phosphorylation sites at Thr744 and Ser747. There are two potential splice variants. One contains a 37 aa substitution for aa 293-328, while a second contains an alternative start site at Met100 coupled to a deletion of aa 122-154. Sema4A is reportedly cleaved to generate both a monomeric and a dimeric soluble isoforms. Over aa 32-683, human Sema4A shares 86% aa identity with mouse Sema4A.

PRODUCT SPECIFIC NOTICES

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