Human Semaphorin 3A Alexa Fluor® 405-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1250V
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Semaphorin 3A in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant human (rh) Semaphorin 3B, rhSemaphorin 3C, rhSemaphorin 3D, rhSemaphorin 3E and rhSemaphorin 3F is observ
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Semaphorin 3A Lys26-Val771 (Arg552Ala, Arg555Ala) Accession # Q14563
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.*

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Intracellular Staining by Flow Cytometry	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

The Semaphorins constitute a large family of secreted, GPI-anchored and transmembrane cell signaling molecules. Depending on their domain organization and species origin, these proteins can be classified into eight groups. To date, at least 19 vertebrate Semaphorins belonging to five groups (class 3 through 7) have been identified. All Semaphorins contain a conserved, 500 amino acid (aa) Sema domain at the amino terminus. Semaphorins are best known for their roles in axon guidance during neuronal development. Semaphorins are also expressed in non-neuronal tissues and are involved in angiogenesis, hematopoiesis, organogenesis, and the regulation of immune functions (1, 2).

Class 3 Semaphorins (Sema3) are secreted proteins containing a Sema domain, an immunoglobulin c2-like domain and a basic domain near the carboxyl tail. Sema3A (also referred to as SemaIII, SemD and Collapsin) cDNA predicts a 771 aa precursor protein with a putative 25 aa signal peptide (1-3). Bioactive Sema3A is a disulfide-linked dimer (4). The bioactivity is increased after proteolytic processing by a furin-like endoprotease near the carboxy-terminus (1). The functional receptor complex for Sema3 is composed of two distinct transmembrane proteins: Neuropilin-1 (Npn-1) and Plexin-A. Npn-1 binds directly to Sema3A with high-affinity and confers specificity. Plexin-A interacts with Npn-1 to increase the affinity of the complex for Sema3A and serves as the signaling subunit in the receptor complex (1, 2, 5).

PRODUCT SPECIFIC NOTICES

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