Human F-Spondin/SPON1 Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3135T
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human F-Spondin/SPON1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human F-Spondin/SPON1 Phe29-Cys807 Accession # Q9HCB6
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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.*

Neutralization	Optimal dilution of this antibody should be experimentally determined.
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

F-Spondin (“**F**loor plate” and “thrombospondin” homology; also Spondin-1 and VSGP) is a member of the F-Spondin family of proteins that collectively belong to a subgroup of TSR (thrombospondin) type I class molecules (1). Class I molecules are either membrane-bound or ECM-associated. F-Spondin is a 110 kDa, secreted, heparin-binding extracellular matrix glycoprotein first characterized in rat for its high expression in embryonic floor plate (2-4). Human F-Spondin is synthesized as an 807 amino acid (aa) precursor that contains a 28 aa signal sequence and a 779 aa mature region (3, 4). The mature region includes an N-terminal reelin-like domain (aa 1-200), a centrally placed F-Spondin (FS) type segment (aa 201-440), and six C-terminal class 2 thrombospondin type I repeats (1, 3, 5). Class 1 and 2 repeats differ in the placement of their cysteine residues. The fifth and sixth TSP repeats (aa 668-806) apparently bind ECM, while TSP repeats 1-4 (aa 442-666), plus the spondin segment, are suggested to mediate either repulsive activity (on motor neurons), or outgrowth promoting activity (on sensory neurons) (1, 6). At least two isoforms of F-Spondin are known. Both are proteolytically-generated, one by plasmin, another by an unidentified protease. Plasmin cleaves the C-terminus at two points, generating a soluble, 95 kDa, 656 aa F-Spondin that contains all but TSP repeats #5 and 6 (7). The unidentified protease appears to cleave F-Spondin between the FS segment and the first TSP repeat, generating 60 kDa and 50 kDa fragments, respectively (6). F-Spondin shows highly unusual glycosylation, exhibiting both C-mannosylation (mannose bound to Trp) and O-fucosylation (fucose bound to Ser/Thr) (4). The significance of these glycosidic modifications is unknown. Mature human F-Spondin is 98%, 97%, 98%, and 97% aa identical to mature canine, rat, bovine and mouse F-Spondin, respectively. Mammalian cells known to express F-Spondin include floor plate epithelium, ventral motor neurons, Schwann cells, fibroblasts, hippocampal pyramidal cells, endothelial cells, vascular smooth muscle cells and some tumor cells (6, 8, 9).

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