Human R-Spondin 2 Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 879709

Catalog Number: FAB3266G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human R-Spondin 2 in direct ELISAs.
Source	Monoclonal Rat IgG_1 Clone # 879709
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human R-Spondin 2 Met1-Gly205 Accession # Q6UXX9
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

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

Human Roof plate-specific Spondin 2 isoform 1 (R-Spondin 2, RSPO-2), also known as cysteine-rich and single thrombospondin domain containing protein 2 (Cristin 2), is a 33 kDa secreted protein that belongs to the R-Spondin family. The four known human R-Spondins regulate β-catenin signaling and overlap in expression and function (1-3). Like other R-Spondins, R-Spondin 2 contains two adjacent cysteine-rich furin-like domains (aa 90-134) followed by a thrombospondin (TSP-1) motif (aa 144-204) and a C-terminal region rich in basic residues (aa 207-243). The basic region appears to mediate cell surface retention but not to influence function (1). R-Spondin 2 contains one potential N-glycosylation site. Of the three reported splice isoforms of human R-Spondin 2, isoform 2 lacks residues 1-67 of isoform 1, while isoform 3 has a glycine substitution for residues 32-95 of isoform 1. Human R-Spondin 2 is expressed in organs of endodermal origin in adults, including intestine and lung, and is downregulated in tumors of these tissues (1). In the embryonic mouse, R-Spondin 2 is expressed most highly in the hippocampus and in developing teeth and bones (4). Studies in *Xenopus* and mouse embryos indicate that R-Spondin 2 is an extracellular activator of Wnt/β-catenin signaling and is required for myogenesis (1). Mouse R-Spondin proteins bind both LRP-6 and Frizzled-8 but do not appear to form a ternary complex (3). R-Spondin 2 over-expression in *Xenopus* also blocks signaling of TGF-β ligands, activin, nodal and BMP-4 (1). Human R-Spondin 2 is highly conserved across species, sharing 97-98% aa identity with mouse, rat, canine, bovine, and opossum R-Spondin 2 and 86% aa identity with *Xenopus* R-Spondin 2 within aa 22-205. Mature R-Spondin 2 shares ~40% aa identity with R-Spondin 1, R-Spondin 3, and R-Spondin 4.

PRODUCT SPECIFIC NOTICES

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