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RSPO1 Antibody

Catalog # ASC10908

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q2MKA7
Other Accession	NP_001033722, 84490388
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	28959
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	RSPO1 antibody can be used for detection of RSPO1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	284654
Other Names	R-spondin-1, Roof plate-specific spondin-1, hRspo1, RSPO1
Target/Specificity	RSPO1; At least three isoforms of RSPO1 are known to exist; this antibody will detect the largest and smallest isoforms. RSPO1 antibody will not cross-react with other RSPO family members.
Reconstitution & Storage	RSPO1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	RSPO1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RSPO1
Function	Activator of the canonical Wnt signaling pathway by acting as a ligand for LGR4-6 receptors (PubMed:29769720). Upon binding to LGR4-6 (LGR4, LGR5 or LGR6), LGR4-6 associate with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. Also regulates the canonical Wnt/beta-catenin- dependent pathway and non-canonical Wnt signaling by acting as an inhibitor of ZNRF3, an important regulator of the Wnt signaling pathway. Acts as a ligand for frizzled FZD8 and LRP6. May negatively

	regulate the TGF-beta pathway. Has a essential roles in ovary determination. Regulates Wnt signaling by antagonizing DKK1/KREM1- mediated internalization of LRP6 through an interaction with KREM1 (PubMed:17804805).
Cellular Location	Secreted. Nucleus {ECO:0000250|UniProtKB:Q9Z132} Note=Seems to mainly localize to nucleoli {ECO:0000250|UniProtKB:Q9Z132}
Tissue Location	Abundantly expressed in adrenal glands, ovary, testis, thyroid and trachea but not in bone marrow, spinal cord, stomach, leukocytes colon, small intestine, prostate, thymus and spleen.

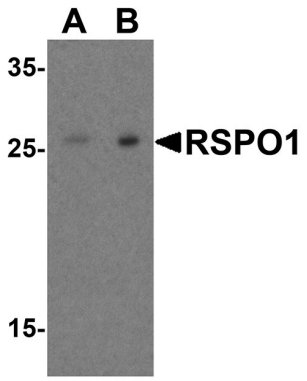
Background

RSPO1 Antibody: RSPO1 is a member of a family of secreted growth factors that can operate through the canonical Wnt signaling pathway by stabilizing the intracellular beta-catenin, thereby regulating functions mediated by beta-catenin such as cell fate decisions and embryonic patterning. RSPO1 was recently identified through linkage analysis to be involved in sex determination and mammalian ovarian development. RSPO1 is thought to regulate cellular responsiveness to Wnt ligands by modulating the cell-surface expression of the Wnt co-receptor LRP6 by interfering with the DKK/Kremen-mediated internalization of LRP6 through an interaction with Kremen, resulting in increased LRP6 cell-surface levels.

References

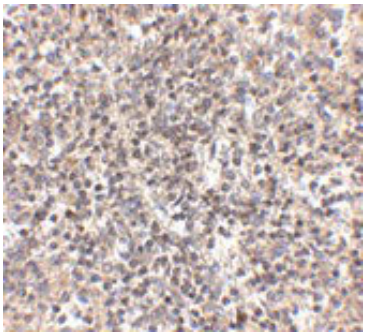
Kamata T, Katsube K, Michikawa M, et al. R-spondin, a novel gene with thrombospondin type I domain, was expressed in the dorsal neural tube and affected Wnts mutants. Biochim. Biophys. Acta 2004; 1676:51-61.
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Parma P, Radi O, Vidal V, et al. R-spondin1 is essential in sex determination, skin differentiation and malignancy. Nat. Genet. 2006; 38:1304-9.
Chassot AA, Ranc F, Gregoire EP, et al. Activation of b-catenin signalling by Rspo1 controls differentiation of the mammalian ovary. Hum. Mol. Genet. 2008; 17:1278-91.

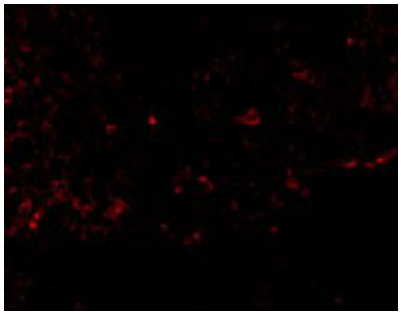
Images



Western blot analysis of RSPO1 in human heart tissue lysate with RSPO1 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of RSPO1 in human spleen tissue with RSPO1 antibody at 2.5 µg/mL.





Immunofluorescence of RSPO1 in Human Spleen tissue with RSPO1 antibody at 20 µg/mL.

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