

RSPO3 Antibody
Catalog # ASC11915**Specification**

RSPO3 Antibody - Product Information

Application
Primary Accession
Other Accession
Reactivity
Host
Clonality
Isotype
Calculated MW

WB, ICC, IF
[Q9BXY4](#)
[NP_116173](#), [18490982](#)
Human, Mouse
Rabbit
Polyclonal
IgG
Predicted: 30 kDa

Application Notes

Observed: 30 kDa KDa
RSPO3 antibody can be used for detection of RSPO3 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

RSPO3 Antibody - Additional Information

Gene ID

84870

Target/Specificity

RSPO3; RSPO3 antibody is human and mouse reactive. At least three isoforms of RSPO3 are known to exist; this antibody will detect all three.

Reconstitution & Storage

RSPO3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

RSPO3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RSPO3 Antibody - Protein Information

Name RSPO3

Synonyms PWTSR, THSD2

Function

Activator of the canonical Wnt signaling pathway by acting as a ligand for LGR4-6 receptors, which acts as a key regulator of angiogenesis. 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

(PubMed:21727895, PubMed:21909076, PubMed:22615920). Acts as a key regulator of angiogenesis by controlling vascular stability and pruning: acts by activating the non-canonical Wnt signaling pathway in endothelial cells (By similarity) (PubMed:21727895, PubMed:21909076, PubMed:22615920). Can also amplify Wnt signaling pathway independently of LGR4-6 receptors, possibly by acting as a direct antagonistic ligand to RNF43 and ZNRF3 (PubMed:29769720).

Cellular Location

Secreted {ECO:0000250|UniProtKB:Q2TJ95}.

Tissue Location

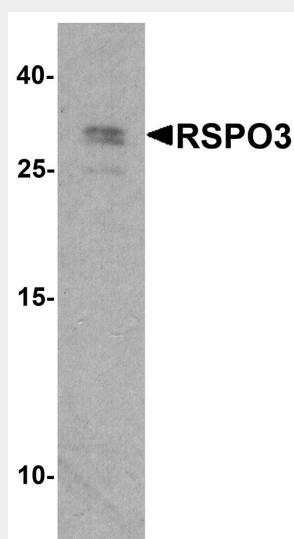
Ubiquitously expressed. Expressed at higher level in placenta, small intestine, fetal thymus and lymph node (PubMed:12463421). Highly expressed in endothelial cells (PubMed:26766444).

RSPO3 Antibody - Protocols

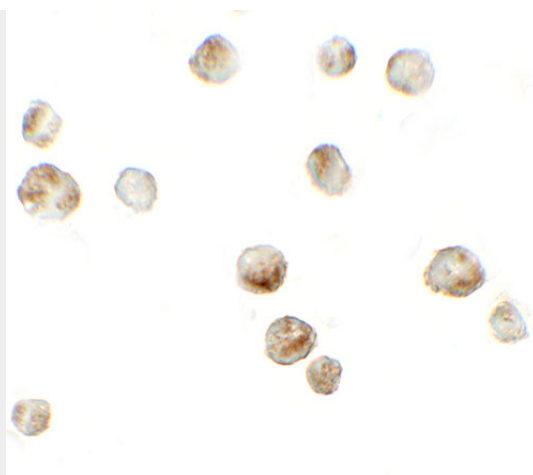
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

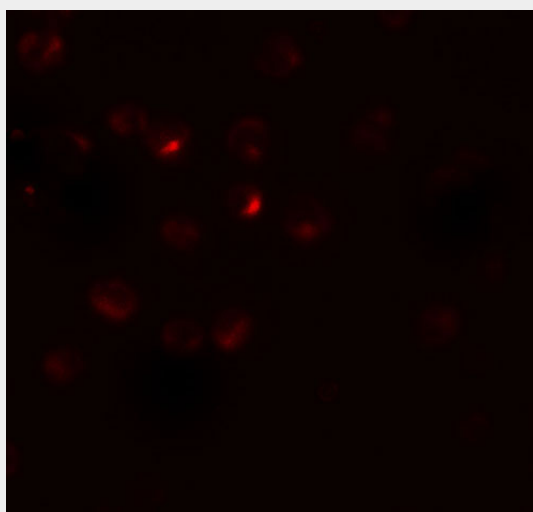
RSPO3 Antibody - Images



Western blot analysis of RSPO3 in 293 cell lysate with RSPO3 antibody at 1 µg/ml.



Immunocytochemistry of RSPO3 in 293 cells with RSPO3 antibody at 5 µg/mL.



Immunofluorescence of RSPO3 in 293 cells with RSPO3 antibody at 20 µg/mL.

RSPO3 Antibody - Background

RSPO3 is a member of the R-spondin family and plays a role in the regulation of Wnt (wingless-type MMTV integration site family)/beta-catenin and Wnt/planar cell polarity (PCP) signaling pathways, which are involved in development, cell growth and disease pathogenesis (1,2). RSPO3 has been shown to be involved in regulating the balance between angioblast and blood cell specification during embryonic vasculogenesis and angiogenesis and may be involved in tumor development (3,4).

RSPO3 Antibody - References

Chen JZ, Wang S, Tang R, et al. Cloning and identification of a cDNA that encodes a novel human protein with thrombospondin type I repeat domain, hPWTSR. *Mol. Biol. Rep.* 2002; 29:287-92.
Kim KA, Wagle M, Tran K, et al. R-Spondin family members regulate the Wnt pathway by a common mechanism. *Mol. Biol. Cell* 2008; 19:2588-96.
Kazanskaya O, Ohkawara B, Herault M, et al. The Wnt signaling regulator R-spondin 3 promotes angioblast and vascular development. *Development* 2008; 3655-64.
Seshagiri S, Stawiski EW, Durinck S, et al. Recurrent R-spondin fusions in colon cancer. *Nature* 2012; 488:660-4.