

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody
Peptide-affinity purified goat antibody
Catalog # AF2123a

Specification

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody - Product Information

Application	WB
Primary Accession	Q8WTW4
Other Accession	NP_006536 , 10641
Reactivity	Human
Predicted	Mouse
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	43658

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody - Additional Information

Gene ID 10641

Other Names

Nitrogen permease regulator 2-like protein, NPR2-like protein, Gene 21 protein, G21 protein, Tumor suppressor candidate 4, NPRL2, TUSC4

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody - Protein Information

Name NPRL2 {ECO:0000303|PubMed:18616680, ECO:0000312|HGNC:HGNC:24969}

Function

Catalytic component of the GATOR1 complex, a multiprotein complex that functions as an inhibitor of the amino acid-sensing branch of the mTORC1 pathway (PubMed:23723238, PubMed:29590090, PubMed:35338845, PubMed:38006878). In response to amino acid depletion, the GATOR1 complex has GTPase activating protein (GAP) activity and strongly increases GTP hydrolysis by RagA/RRAGA (or RagB/RRAGB) within heterodimeric Rag complexes, thereby turning them into their inactive GDP-bound form, releasing mTORC1 from lysosomal surface and inhibiting mTORC1 signaling (PubMed:23723238, PubMed:29590090, PubMed:35338845). In the presence of abundant amino acids, the GATOR1 complex is ubiquitinated and inhibited by GATOR2 (PubMed:23723238, PubMed:36528027). Within the GATOR1 complex, NPRL2 constitutes the catalytic subunit that mediates the GTPase activator activity and under methionine-sufficient conditions, the GTPase activator activity is inhibited by PRMT1 through methylation and consequently inducing timely mTORC1 activation (PubMed:30651352, PubMed:35338845, PubMed:27173016).

Cellular Location

Lysosome membrane. Note=Localization to lysosomes is mediated by the KICSTOR complex and is amino acid-independent.

Tissue Location

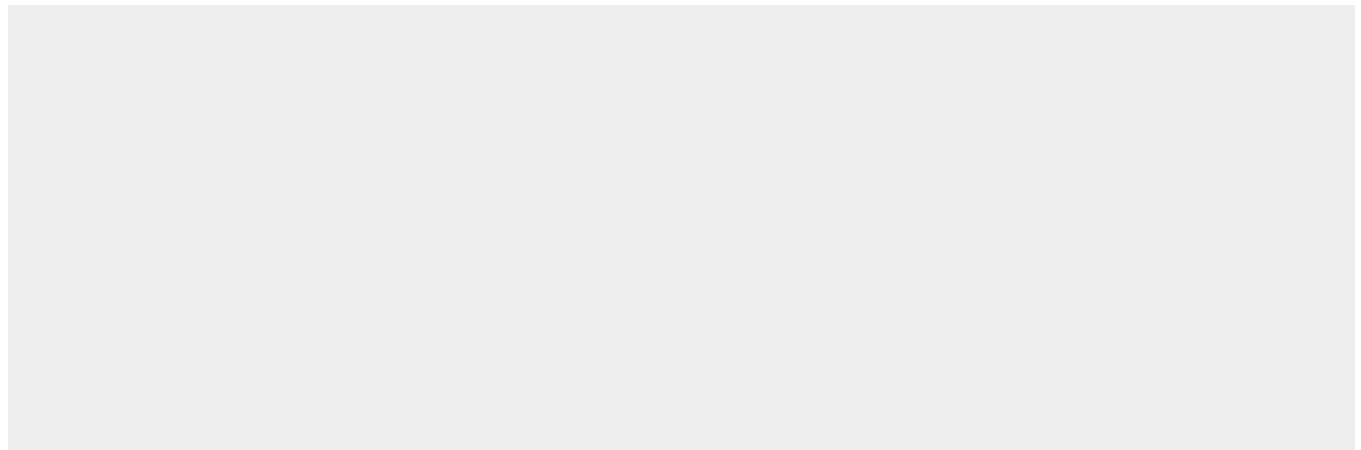
Most abundant in skeletal muscle, followed by brain, liver and pancreas, with lower amounts in lung, kidney, placenta and heart. Expressed in the frontal lobe cortex as well as in the temporal, parietal, and occipital lobes (PubMed:27173016, PubMed:26505888). Expressed in most lung cancer cell lines tested

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) 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](#)

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody - Images





AF2123a (0.1 µg/ml) staining of Human Muscle lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



EB08275 (0.1µg/ml) staining of Human Muscle lysate (35µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-TUSC4 / NPRL2 (aa 140 to 151) Antibody - References

A genome-wide screen for regulators of TORC1 in response to amino acid starvation reveals a conserved Npr2/3 complex. Neklesa TK, et al. PLoS Genet, 2009 Jun. PMID 19521502.

The tumor suppressor NPRL2 in hepatocellular carcinoma plays an important role in progression and can be served as an independent prognostic factor. Otani S, et al. J Surg Oncol, 2009 Oct 1. PMID 19274676.

[Down-regulation of RBSP3/CTDSPL, NPRL2/G21, RASSF1A, ITGA9, HYAL1 and HYAL2 genes in non-small cell lung cancer] Anedchenko EA, et al. Mol Biol (Mosk), 2008 Nov-Dec. PMID 19140316.

TUSC4/NPRL2, a novel PDK1-interacting protein, inhibits PDK1 tyrosine phosphorylation and its downstream signaling. Kurata A, et al. Cancer Sci, 2008 Sep. PMID 18616680.

Large-scale mapping of human protein-protein interactions by mass spectrometry. Ewing RM, et al. Mol Syst Biol, 2007. PMID 17353931.