

**NPRL2 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16818B**

**Specification**

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**NPRL2 Antibody (C-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q8WTW4</a>
Other Accession	<a href="#">Q9WUE4</a> , <a href="#">NP_006536.3</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	43658
Antigen Region	346-373

**NPRL2 Antibody (C-term) - 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

**Target/Specificity**

This NPRL2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 346-373 amino acids from the C-terminal region of human NPRL2.

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

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

**Precautions**

NPRL2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**NPRL2 Antibody (C-term) - 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

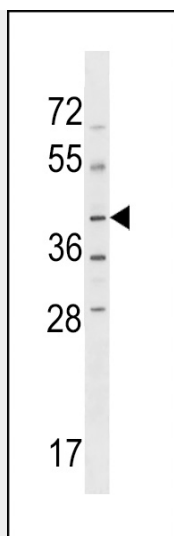
#### **NPRL2 Antibody (C-term) - Protocols**

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](#)

#### **NPRL2 Antibody (C-term) - Images**





NPRL2 Antibody (C-term) (Cat. #AP16818b) western blot analysis in HL-60 cell line lysates (35ug/lane). This demonstrates the NPRL2 antibody detected the NPRL2 protein (arrow).

#### **NPRL2 Antibody (C-term) - Background**

Suppresses Src-dependent tyrosine phosphorylation and activation of PDPK1 and its downstream signaling. Down-regulates PDPK1 kinase activity by interfering with tyrosine phosphorylation at the Tyr-9 Tyr-373 and Tyr-376 residues. May act as a tumor suppressor. Suppresses cell growth and enhanced sensitivity to various anticancer drugs.

#### **NPRL2 Antibody (C-term) - References**

Spielewoy, N., et al. Eukaryotic Cell 9(4):592-601(2010)  
Otani, S., et al. J Surg Oncol 100(5):358-363(2009)  
Neklesa, T.K., et al. PLoS Genet. 5 (6), E1000515 (2009) :  
Anedchenko, E.A., et al. Mol. Biol. (Mosk.) 42(6):965-976(2008)  
Kurata, A., et al. Cancer Sci. 99(9):1827-1834(2008)