

**PUM2 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7569b**

**Specification**

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**PUM2 Antibody (N-term) - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">Q8TB72</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Calculated MW	<b>114216</b>
Antigen Region	<b>133-162</b>

**PUM2 Antibody (N-term) - Additional Information**

**Gene ID** 23369

**Other Names**

Pumilio homolog 2, Pumilio-2, PUM2, KIAA0235, PUMH2

**Target/Specificity**

This PUM2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 133-162 amino acids from the N-terminal region of human PUM2.

**Dilution**

WB~~1:1000  
IHC-P~~1:10~50

**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**

PUM2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**PUM2 Antibody (N-term) - Protein Information**

**Name** PUM2

**Synonyms** KIAA0235, PUMH2

**Function** Sequence-specific RNA-binding protein that acts as a post-transcriptional repressor by binding the 3'-UTR of mRNA targets. Binds to an RNA consensus sequence, the Pumilio Response Element (PRE), 5'-UGUANAUA-3', that is related to the Nanos Response Element (NRE) (PubMed:[21397187](#)). Mediates post-transcriptional repression of transcripts via different mechanisms: acts via direct recruitment of the CCR4-POP2-NOT deadenylase leading to translational inhibition and mRNA degradation (PubMed:[22955276](#)). Also mediates deadenylation-independent repression by promoting accessibility of miRNAs (PubMed:[18776931](#), PubMed:[22345517](#)). Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3'-UTR and facilitating miRNA regulation (PubMed:[22345517](#)). Plays a role in cytoplasmic sensing of viral infection (PubMed:[25340845](#)). Represses a program of genes necessary to maintain genomic stability such as key mitotic, DNA repair and DNA replication factors. Its ability to repress those target mRNAs is regulated by the lncRNA NORAD (non-coding RNA activated by DNA damage) which, due to its high abundance and multitude of PUMILIO binding sites, is able to sequester a significant fraction of PUM1 and PUM2 in the cytoplasm (PubMed:[26724866](#)). May regulate DCUN1D3 mRNA levels (PubMed:[25349211](#)). May support proliferation and self-renewal of stem cells. Binds specifically to miRNA MIR199A precursor, with PUM1, regulates miRNA MIR199A expression at a posttranscriptional level (PubMed:[28431233](#)).

#### **Cellular Location**

Cytoplasm. Cytoplasmic granule. Cytoplasm, perinuclear region. Note=The cytoplasmic granules are stress granules which are a dense aggregation in the cytosol composed of proteins and RNAs that appear when the cell is under stress. Colocalizes with NANOS3 in the stress granules Colocalizes with NANOS1 and SNAPIN in the perinuclear region of germ cells.

#### **Tissue Location**

Expressed in male germ cells of adult testis (at protein level). Highly expressed in testis and ovary. Predominantly expressed in stem cells and germ cells. Expressed at lower level in brain, heart, kidney, liver, muscle, placenta, intestine and stomach Expressed in cerebellum, corpus callosum, caudate nucleus, hippocampus, medulla oblongata and putamen. Expressed in all fetal tissues tested

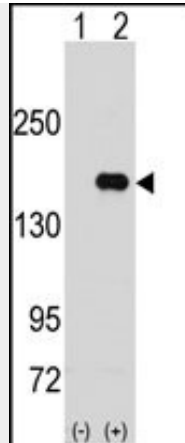
#### **PUM2 Antibody (N-term) - Protocols**

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

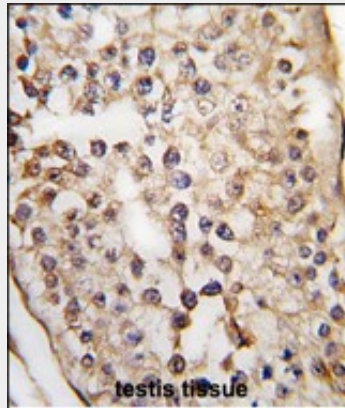
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **PUM2 Antibody (N-term) - Images**





Western blot analysis of PUM2 (arrow) using rabbit polyclonal PUM2 Antibody (N-term) (Cat.#AP7569b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PUM2 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human testis tissue reacted with PUM2 Antibody (C-term) (Cat.#AP7569b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

### **PUM2 Antibody (N-term) - Background**

PUM2 is a member of the PUF family, evolutionarily conserved RNA-binding proteins related to the Pumilio proteins of *Drosophila* and the fem-3 mRNA binding factor proteins of *C. elegans*. This protein contains a sequence-specific RNA binding domain comprised of eight repeats and N- and C-terminal flanking regions, and serves as a translational regulator of specific mRNAs by binding to their 3' untranslated regions. The evolutionarily conserved function of this protein in invertebrates and lower vertebrates suggests that the human protein may be involved in translational regulation of embryogenesis, and cell development and differentiation.

### **PUM2 Antibody (N-term) - References**

- Gupta, Y.K., *Structure* 16 (4), 549-557 (2008)
- Spassov, D.S., *JUBMB Life* 55 (7), 359-366 (2003)
- Spassov, D.S., *Gene* 299 (1-2), 195-204 (2002)