

PUM2 Antibody (S182)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7734d

Specification

PUM2 Antibody (S182) - Product Information

Application	WB, IHC-P, FC,E
Primary Accession	Q8TB72
Other Accession	Q80U58
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	114216
Antigen Region	159-189

PUM2 Antibody (S182) - 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 159-189 amino acids from human PUM2.

Dilution

WB~~1:1000
IHC-P~~1:10~50
FC~~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 (S182) is for research use only and not for use in diagnostic or therapeutic procedures.

PUM2 Antibody (S182) - 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 postranscriptional 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.

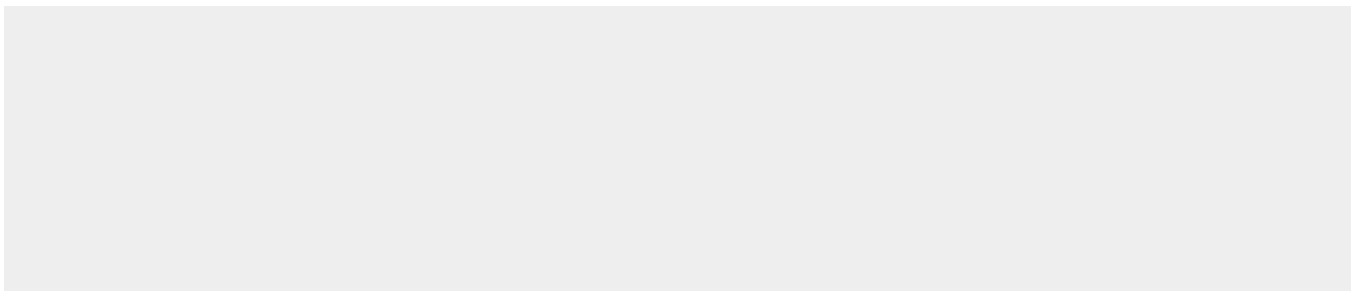
Tissue Location

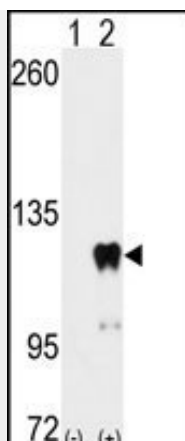
Expressed in male germ cells of adult testis (at protein level). Highly expressed in testis and ovary. Predominantly expressed in stem cells and germ cells. Expressed at lower level in brain, heart, kidney, liver, muscle, placenta, intestine and stomach Expressed in cerebellum, corpus callosum, caudate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

PUM2 Antibody (S182) - Protocols

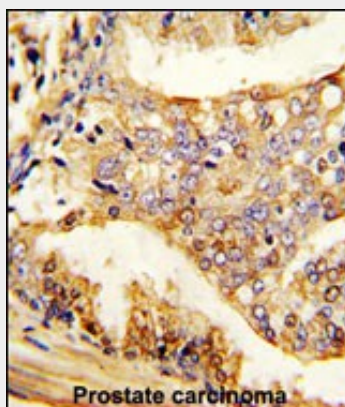
Provided below are standard protocols that you may find useful for product applications.

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

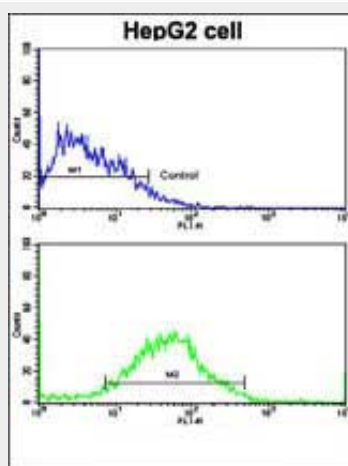
PUM2 Antibody (S182) - Images



Western blot analysis of PUM2 (arrow) using PUM2 Antibody (S182) (Cat.#AP7734d). 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 prostate carcinoma reacted with PUM2 Antibody (S182), 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.



Flow cytometric analysis of HepG2 cells using PUM2 Antibody (S182)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

PUM2 Antibody (S182) - Background

PUM2 is a sequence-specific RNA-binding protein that regulates translation and mRNA stability by binding the 3'-UTR of mRNA targets. Its interactions and tissue specificity suggest that it may be required to support proliferation and self-renewal of stem cells by regulating the translation of key transcripts.

PUM2 Antibody (S182) - References

Kusz,K., Mol. Reprod. Dev. 74 (6), 795-799 (2007)
Spik,A., Reprod Biol 6 SUPPL 1, 37-42 (2006)
Moore,F.L., Proc. Natl. Acad. Sci. U.S.A. 100 (2), 538-543 (2003)