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KD-Validated Anti-PUM2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1666

Specification

KD-Validated Anti-PUM2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q8TB72
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 114 kDa , observed , 130 kDa KDa**
Gene Name	**PUM2**
Aliases	**Pumilio RNA Binding Family Member 2; PUMH2; KIAA0235; Pumilio Homolog 2; Pumilio-2; Pumilio Homolog 2 (Drosophila); PUML2**
Immunogen	**A synthesized peptide derived from human Pumilio 2**

KD-Validated Anti-PUM2 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**23369**

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

KD-Validated Anti-PUM2 Rabbit Monoclonal Antibody - 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.

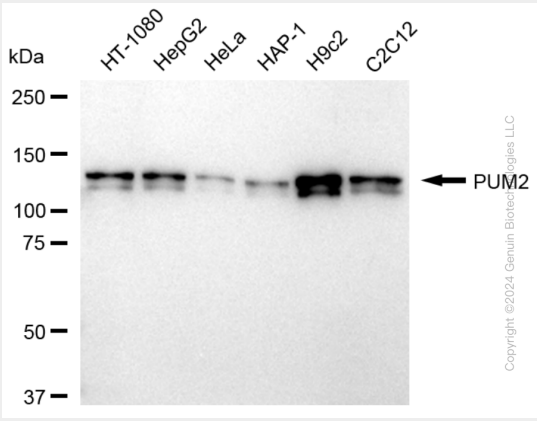
Tissue Location
Expressed in male germ cells of adult testis (at protein level). Highly expressed in testis and ovary. Predominantly expressed in stem cells and germ cells. Expressed at lower level in brain, heart, kidney, liver, muscle, placenta, intestine and stomach Expressed in cerebellum, corpus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

KD-Validated Anti-PUM2 Rabbit Monoclonal 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 Cytomety
- Cell Culture

KD-Validated Anti-PUM2 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-PUM2 antibody (Cat#AGI1666). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with

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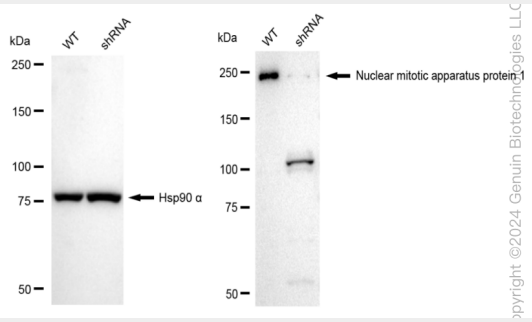
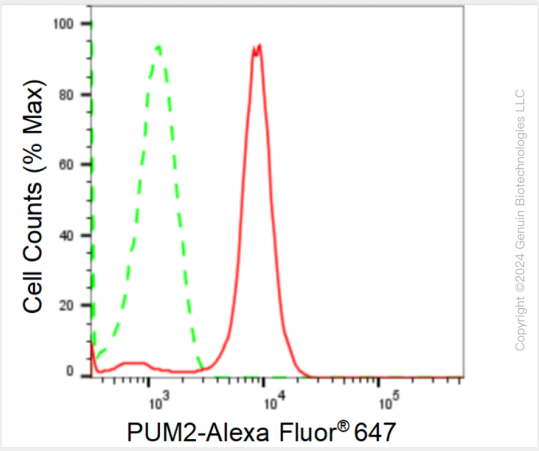
anti-PUM2 antibody (Cat#AGI1666, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-PUM2 antibody (Cat#AGI1666). PUM2 expression in wild type (WT) and PUM2 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-PUM2 antibody (Cat#AGI1666, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PUM2 expression in H9c2 cells using anti-PUM2 antibody (Cat#AGI1666, 1:2,000). Green, isotype control; red, PUM2.