

Anti-Pumilio 1 Rabbit Monoclonal Antibody Catalog # ABO15379

Specification

Anti-Pumilio 1 Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	Q14671
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Pumilio 1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-Pumilio 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 9698

Other Names

Pumilio homolog 1, HsPUM, Pumilio-1, PUM1 ([HGNC:14957](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=14957))

Calculated MW

140 kDa KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200
IP 1:50
FC 1:60

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Pumilio 1

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Pumilio 1 Rabbit Monoclonal Antibody - Protein Information

Name PUM1 ([HGNC:14957](#))

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: [18328718](http://www.uniprot.org/citations/18328718), PubMed: [21397187](http://www.uniprot.org/citations/21397187), PubMed: [21572425](http://www.uniprot.org/citations/21572425), PubMed: [21653694](http://www.uniprot.org/citations/21653694)). 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](http://www.uniprot.org/citations/22955276)). Also mediates deadenylation-independent repression by promoting accessibility of miRNAs (PubMed: [18776931](http://www.uniprot.org/citations/18776931), PubMed: [20818387](http://www.uniprot.org/citations/20818387), PubMed: [20860814](http://www.uniprot.org/citations/20860814), PubMed: [22345517](http://www.uniprot.org/citations/22345517)). Following growth factor stimulation, phosphorylated and binds to the 3'-UTR of CDKN1B/p27 mRNA, inducing a local conformational change that exposes miRNA-binding sites, promoting association of miR-221 and miR-222, efficient suppression of CDKN1B/p27 expression, and rapid entry to the cell cycle (PubMed: [20818387](http://www.uniprot.org/citations/20818387)). Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3'-UTR and facilitating miRNA regulation (PubMed: [22345517](http://www.uniprot.org/citations/22345517), PubMed: [29474920](http://www.uniprot.org/citations/29474920)). 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](http://www.uniprot.org/citations/26724866)). Involved in neuronal functions by regulating ATXN1 mRNA levels: acts by binding to the 3'-UTR of ATXN1 transcripts, leading to their down-regulation independently of the miRNA machinery (PubMed: [25768905](http://www.uniprot.org/citations/25768905), PubMed: [29474920](http://www.uniprot.org/citations/29474920)). Plays a role in cytoplasmic sensing of viral infection (PubMed: [25340845](http://www.uniprot.org/citations/25340845)). In testis, acts as a post-transcriptional regulator of spermatogenesis by binding to the 3'-UTR of mRNAs coding for regulators of p53/TP53. Involved in embryonic stem cell renewal by facilitating the exit from the ground state: acts by targeting mRNAs coding for naive pluripotency transcription factors and accelerates their down-regulation at the onset of differentiation (By similarity). Binds specifically to miRNA MIR199A precursor, with PUM2, regulates miRNA MIR199A expression at a posttranscriptional level (PubMed: [28431233](http://www.uniprot.org/citations/28431233)).

Cellular Location

Cytoplasm. Cytoplasm, P-body. Cytoplasmic granule. Note=Recruited to cytoplasmic stress granules upon viral infection.

Tissue Location

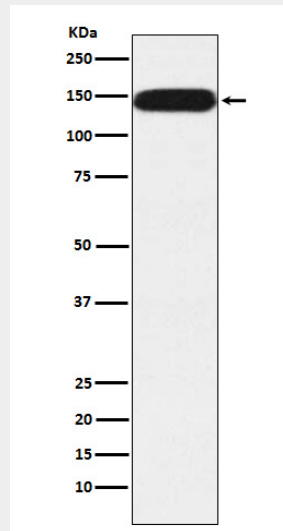
Expressed in brain, heart, kidney, muscle, intestine and stomach. Not expressed in cerebellum, corpus callosum, caudate nucleus, hippocampus, medulla oblongata and putamen. Expressed in all fetal tissues tested.

Anti-Pumilio 1 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 Cytometry](#)
- [Cell Culture](#)

Anti-Pumilio 1 Rabbit Monoclonal Antibody - Images



Western blot analysis of Pumilio 1 expression in HeLa cell lysate.