

## Recombinant Mouse Pum2 Protein, Myc/DDK-tagged

Cat. No. Pum2-5258M Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Purified recombinant protein of mouse full-length pumilio RNA-binding family member 2 (Pum2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

**Species** Mouse

**Source** HEK293

#### Description

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). 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. Also mediates deadenylation-independent repression by promoting accessibility of miRNAs. Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3'-UTR and facilitating miRNA regulation. Plays a role in cytoplasmic sensing of viral infection. 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. May regulate DCUN1D3 mRNA levels. 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.

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<b>Molecular Mass</b>	106.6 kDa
<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Storage</b>	Store at -80 centigrade after receiving vials.
<b>Concentration</b>	>50 µg/mL as determined by microplate BCA method
<b>Storage Buffer</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

<b>Gene Name</b>	Pum2 pumilio RNA-binding family member 2 [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Pum2
<b>Synonyms</b>	PUM2; pumilio 2 ( <i>Drosophila</i> ); pumilio homolog 2; PUM1; Pumm2; mKIAA0235; 5730503J23Rik
<b>Gene ID</b>	80913
<b>mRNA Refseq</b>	NM_001160222
<b>Protein Refseq</b>	NP_001153694
<b>UniProt ID</b>	Q80U58

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