

# Pumilio 1 (N-19): sc-65187

## BACKGROUND

Pumilio 1, also known as PUM1, PUMH1 (Pumilio homolog 1), HSPUM, PUMH or PUM11, is a homolog of the *Drosophila* Pumilio protein and belongs to the PUF family. The PUF family is comprised of evolutionarily conserved proteins that contain a C-terminal RNA-binding domain made up of eight highly conserved tandem repeats. PUF proteins function as sequence-specific RNA-binding proteins and bind NREs (nanos response elements) in the 3'-untranslated regions of target mRNAs. They play an important role mediating mRNA stabilization and repressing translation. Pumilio 1 is a typical PUF protein expressed in fetal tissues as well as adult stomach, kidney, intestine, muscle, brain and heart tissues. Pumilio 1 localizes to the cytoplasm and is believed to participate in cell fate, cell development, cell differentiation and maintenance of somatic stem cells.

## REFERENCES

1. Wang, X., et al. 2001. Crystal structure of a Pumilio homology domain. *Mol. Cell* 7: 855-865.
2. Spassov, D.S., et al. 2002. Cloning and comparative sequence analysis of PUM1 and PUM2 genes, human members of the Pumilio family of RNA-binding proteins. *Gene* 299: 195-204.
3. Wang, X., et al. 2002. Modular recognition of RNA by a human Pumilio-homology domain. *Cell* 110: 501-512.
4. Spassov, D.S., et al. 2003. The PUF family of RNA-binding proteins: does evolutionarily conserved structure equal conserved function? *IUBMB Life* 55: 359-366.
5. Islam, S., et al. 2005. Developmental and regional expression and localization of mRNAs encoding proteins involved in RNA translocation. *J. Histochem. Cytochem.* 53: 1501-1509.
6. Vessey, J.P., et al. 2006. Dendritic localization of the translational repressor Pumilio 2 and its contribution to dendritic stress granules. *J. Neurosci.* 26: 6496-6508.
7. Raji, B., et al. 2007. The RNA-binding protein Musashi-1 is produced in the developing and adult mouse eye. *Mol. Vis.* 13: 1412-1427.
8. Xu, E.Y., et al. 2007. A gene trap mutation of a murine homolog of the *Drosophila* stem cell factor Pumilio results in smaller testes but does not affect litter size or fertility. *Mol. Reprod. Dev.* 74: 912-921.

## CHROMOSOMAL LOCATION

Genetic locus: PUM1 (human) mapping to 1p35.2; Pum1 (mouse) mapping to 4 D2.2.

## SOURCE

Pumilio 1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Pumilio-1 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-65187 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Pumilio 1 (N-19) is recommended for detection of Pumilio 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pumilio 1 (N-19) is also recommended for detection of Pumilio 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pumilio 1 siRNA (h): sc-62912, Pumilio 1 siRNA (m): sc-62913, Pumilio 1 shRNA Plasmid (h): sc-62912-SH, Pumilio 1 shRNA Plasmid (m): sc-62913-SH, Pumilio 1 shRNA (h) Lentiviral Particles: sc-62912-V and Pumilio 1 shRNA (m) Lentiviral Particles: sc-62913-V.

Molecular Weight of Pumilio 1: 127 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.