SANTA CRUZ BIOTECHNOLOGY, INC.

Pumilio 1 (W-20): sc-65189

BACKGROUND

Pumilio 1, also known as PUM1, PUMH1 (Pumilio homolog 1), HSPUM, PUMH or PUML1, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Pumilio 1 (W-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Pumilio-1 of human origin.

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-65189 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Pumilio 1 (W-20) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 (W-20) is also recommended for detection of Pumilio-1 in additional species, including canine, bovine, porcine and avian.

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.

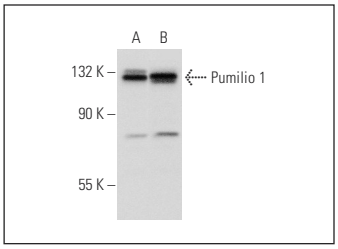
Molecular Weight of Pumilio 1: 127 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Pumilio 1 (W-20): sc-65189. Western blot analysis of Pumilio 1 expression in HEK293 (**A**) and HeLa (**B**) whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.