

Pumilio 2 (P-21): sc-133936

BACKGROUND

Pumilio 2 is a sequence-specific RNA-binding protein that regulates translation and mRNA stability by binding mRNA targets. It supports proliferation and self-renewal of stem cells by regulating the translation of key transcripts. The Pumilio gene encodes proteins that are required for development of germ stem cells in one or both sexes. The Pumilio protein interacts with the human Nanos1 protein and this interaction may play a conserved role in germ cell development. Pumilio 2 is highly expressed in testis and ovary and at lower levels in brain, heart, kidney, liver, muscle, placenta, intestine and stomach. It is also expressed in stem cells, germ cells and in most fetal tissues.

REFERENCES

1. Spassov, D.S. and Jurecic, R. 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.
2. Spassov, D.S. and Jurecic, R. 2003. Mouse Pum1 and Pum2 genes, members of the Pumilio family of RNA-binding proteins, show differential expression in fetal and adult hematopoietic stem cells and progenitors. *Blood Cells Mol. Dis.* 30: 55-69.
3. Jaruzelska, J., Kotecki, M., Kusz, K., Spik, A., Firpo, M. and Reijo Pera, R.A. 2003. Conservation of a Pumilio-Nanos complex from *Drosophila* germ plasm to human germ cells. *Dev. Genes Evol.* 213: 120-126.
4. Moore, F.L., Jaruzelska, J., Fox, M.S., Urano, J., Firpo, M.T., Turek, P.J., Dorfman, D.M. and Pera, R.A. 2003. Human Pumilio 2 is expressed in embryonic stem cells and germ cells and interacts with DAZ (deleted in AZoospermia) and DAZ-like proteins. *Proc. Natl. Acad. Sci. USA* 100: 538-543.
5. Fox, M., Urano, J. and Reijo Pera, R.A. 2005. Identification and characterization of RNA sequences to which human Pumilio 2 (PUM2) and deleted in Azoospermia-like (DAZL) bind. *Genomics* 85: 92-105.
6. Padmanabhan, K. and Richter, J.D. 2006. Regulated Pumilio 2 binding controls RINGO/Spy mRNA translation and CPEB activation. *Genes Dev.* 20:199-209.

CHROMOSOMAL LOCATION

Genetic locus: PUM2 (human) mapping to 2p24.1; Pum2 (mouse) mapping to 12 A1.1.

SOURCE

Pumilio 2 (P-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic Pumilio 2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

Pumilio 2 (P-21) is recommended for detection of Pumilio 2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pumilio 2 siRNA (h): sc-44773, Pumilio 2 siRNA (m): sc-44774, Pumilio 2 shRNA Plasmid (h): sc-44773-SH, Pumilio 2 shRNA Plasmid (m): sc-44774-SH, Pumilio 2 shRNA (h) Lentiviral Particles: sc-44773-V and Pumilio 2 shRNA (m) Lentiviral Particles: sc-44774-V.

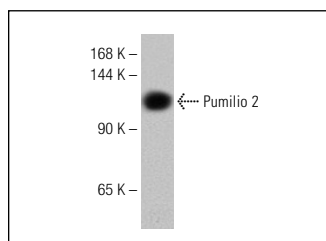
Molecular Weight of Pumilio 2: 114 kDa.

Positive Controls: ES-2 cell lysate: sc-24674.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



Pumilio 2 (P-21): sc-133936. Western blot analysis of human Pumilio 2 transfected 293T whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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



Try **Pumilio 2 (C-8): sc-514108** or **Pumilio 2 (A-10): sc-398632**, our highly recommended monoclonal alternatives to Pumilio 2 (P-21).