SANTA CRUZ BIOTECHNOLOGY, INC.

Pumilio 2 (C-8): sc-514108

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. Jaruzelska, J., et al. 2003. Conservation of a Pumilio-Nanos complex from *Drosophila* germ plasm to human germ cells Dev. Genes Evol. 213: 120-126.
3. Moore, F.L., et al. 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.
4. SWISS-PROT/TrEMBL (41688714). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html.

CHROMOSOMAL LOCATION

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

SOURCE

Pumilio 2 (C-8) is a mouse monoclonal antibody raised against amino acids 153-237 mapping near the N-terminus of Pumilio 2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Pumilio 2 (C-8) is recommended for detection of Pumilio 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

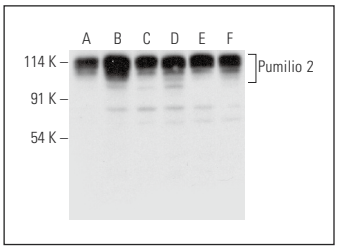
Molecular Weight of Pumilio 2: 114 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HeLa whole cell lysate: sc-2200 or Hs 181 Tes whole cell lysate: sc-364779.

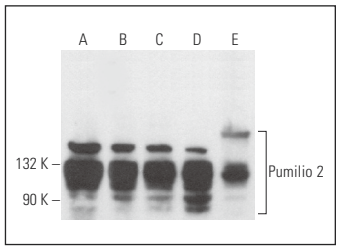
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pumilio 2 (C-8): sc-514108. Western blot analysis of Pumilio 2 expression in ES-2 (**A**), NTERA-2 cl.D1 (**B**), HeLa (**C**), RT-4 (**D**), U-251-MG (**E**) and Hs 181 Tes (**F**) whole cell lysates.



Pumilio 2 (C-8): sc-514108. Western blot analysis of Pumilio 2 expression in IMR-32 (**A**), MDA-MB-231 (**B**), COLO 205 (**C**) and NIH/3T3 (**D**) whole cell lysates and rat brain tissue extract (**E**).

SELECT PRODUCT CITATIONS

1. Namkoong, S., et al. 2018. Systematic characterization of stress-induced RNA granulation. Mol. Cell 70: 175-187.
2. D'Amico, D., et al. 2019. The RNA-binding protein PUM2 impairs mitochondrial dynamics and mitophagy during aging. Mol. Cell 73: 775-787.e10.

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.

PROTOCOLS

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