

# PIPPIN (473.1): sc-101108

## BACKGROUND

PIPPIN, also known as CSDC2 (cold shock domain containing C2, RNA binding), is a Y-box protein (also called cold-shock (CSD) domain-containing protein) and belongs to a family of highly conserved RNA-binding transcriptional regulators. Predominantly expressed in brain cells and localizing to the nucleus and the cytoplasm, PIPPIN contains two RNA-binding motifs, namely PIP1 and PIP2, and one CSD domain. PIPPIN functions as a nucleic acid binding regulatory factor and is believed to participate in brain maturation. More specifically, PIPPIN binds to the 3'-UTR ends of the mRNAs encoding Histone H1 and Histone H3.3. This interaction requires all of the PIPPIN domains to work in concert as one functional protein. In addition, PIPPIN can be sumoylated in a thyroid hormone (T3)-dependent manner. This suggests that PIPPIN modification in response to extracellular stimuli may modulate the regulation of protein synthesis.

## REFERENCES

- Castiglia, D., et al. 1996. PIPPIN, a putative RNA-binding protein specifically expressed in the rat brain. *Biochem. Biophys. Res. Commun.* 218: 390-394.
- Nastasi, T., et al. 1999. PIPPIN is a brain-specific protein that contains a cold-shock domain and binds specifically to H1 degrees and H3.3 mRNAs. *J. Biol. Chem.* 274: 24087-24093.
- Nastasi, T., et al. 2000. Specific neurons of brain cortex and cerebellum are PIPPIN positive. *Neuroreport* 11: 2233-2236.
- Schäfer, C., et al. 2003. CRHSP-24 phosphorylation is regulated by multiple signaling pathways in pancreatic acinar cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 285: G726-G734.
- Raimondi, L., et al. 2003. RNA-binding ability of PIPPIN requires the entire protein. *J. Cell. Mol. Med.* 7: 35-42.
- Cannino, G., et al. 2004. Analysis of cytochrome C oxidase subunits III and IV expression in developing rat brain. *Neuroscience* 128: 91-98.
- Auld, G.C., et al. 2005. Identification of calcium-regulated heat-stable protein of 24 kDa (CRHSP24) as a physiological substrate for PKB and RSK using KESTREL. *Biochem. J.* 389: 775-783.

## CHROMOSOMAL LOCATION

Genetic locus: CSDC2 (human) mapping to 22q13.2; Csdc2 (mouse) mapping to 15 E1.

## SOURCE

PIPPIN (473.1) is a mouse monoclonal antibody raised against recombinant PIPPIN of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

PIPPIN (473.1) is recommended for detection of PIPPIN 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), immunohistochemistry (including paraffin-embedded sections) (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 PIPPIN siRNA (h): sc-76146, PIPPIN siRNA (m): sc-152270, PIPPIN shRNA Plasmid (h): sc-76146-SH, PIPPIN shRNA Plasmid (m): sc-152270-SH, PIPPIN shRNA (h) Lentiviral Particles: sc-76146-V and PIPPIN shRNA (m) Lentiviral Particles: sc-152270-V.

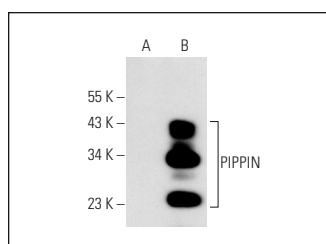
Molecular Weight of PIPPIN: 35 kDa.

Positive Controls: PIPPIN (m): 293T Lysate: sc-122591.

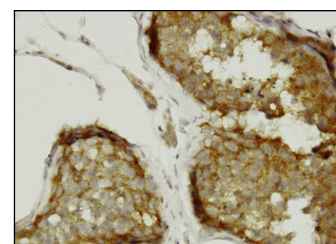
## RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



PIPPIN (473.1): sc-101108. Western blot analysis of PIPPIN expression in non-transfected: sc-117752 (A) and mouse PIPPIN transfected: sc-122591 (B) 293T whole cell lysates.



PIPPIN (473.1): sc-101108. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing cytoplasmic localization.

## STORAGE

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

## PROTOCOLS

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