



TP53INP2 (P-18): sc-85973

BACKGROUND

TP53INP2 (tumor protein p53 inducible nuclear protein 2), also known as DOR or PINH, is a 220 amino acid nuclear protein that is expressed in developing murine brain and spinal cord, as well as in the sensory and motor neuron tracts of the peripheral nervous system. A novel protein involved in the autophagy of mammalian cells, TP53INP2 translocates from the nucleus to the autophagosome structures after activation of autophagy by Rapamycin or starvation. Necessary for autophagosome development and considered a scaffold protein, TP53INP2 recruits LC3 and/or LC3-related proteins, such as GABARAP and GABARAP-like2, to the autophagosome membrane by interacting with the transmembrane protein TMEM49. The gene encoding TP53INP2 is located on human chromosome 20, which is comprised of approximately 2% of the human genome and contains nearly 63 million bases that encode over 600 genes.

REFERENCES

1. Okamura, S., et al. 2001. p53DINP1, a p53-inducible gene, regulates p53-dependent apoptosis. *Mol. Cell* 8: 85-94.
2. Nowak, J., et al. 2002. Assignment of tumor protein p53 induced nuclear protein 1 (TP53INP1) gene to human chromosome band 8q22 by *in situ* hybridization. *Cytogenet. Genome Res.* 97: 140E.
3. Tomasini, R., et al. 2002. P53-dependent expression of the stress-induced protein (SIP). *Eur. J. Cell Biol.* 81: 294-301.
4. Nowak, J., et al. 2005. Assignment of the tumor protein p53 induced nuclear protein 2 (TP53INP2) gene to human chromosome band 20q11.2 by *in situ* hybridization. *Cytogenet. Genome Res.* 108: 362.
5. Bennetts, J.S., et al. 2007. The coding region of TP53INP2, a gene expressed in the developing nervous system, is not altered in a family with autosomal recessive non-progressive infantile ataxia on chromosome 20q11-q13. *Dev. Dyn.* 236: 843-852.
6. Nowak, J. and Iovanna, J.L. 2009. TP53INP2 is the new guest at the table of self-eating. *Autophagy* 5: 383-384.
7. Moran-Jones, K., et al. 2009. hnRNP A2 regulates alternative mRNA splicing of TP53INP2 to control invasive cell migration. *Cancer Res.* 69: 9219-9227.
8. Nowak, J., et al. 2009. The TP53INP2 protein is required for autophagy in mammalian cells. *Mol. Biol. Cell* 20: 870-881.
9. Nordgren, A., et al. 2010. Characterisation of hairy cell leukaemia by tiling resolution array-based comparative genome hybridisation: a series of 13 cases and review of the literature. *Eur. J. Haematol.* 84: 17-25.

CHROMOSOMAL LOCATION

Genetic locus: TP53INP2 (human) mapping to 20q11.22; Trp53inp2 (mouse) mapping to 2 H1.

STORAGE

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

SOURCE

TP53INP2 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TP53INP2 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-85973 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TP53INP2 (P-18) is recommended for detection of TP53INP2 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).

Suitable for use as control antibody for TP53INP2 siRNA (h): sc-76717, TP53INP2 siRNA (m): sc-154565, TP53INP2 shRNA Plasmid (h): sc-76717-SH, TP53INP2 shRNA Plasmid (m): sc-154565-SH, TP53INP2 shRNA (h) Lentiviral Particles: sc-76717-V and TP53INP2 shRNA (m) Lentiviral Particles: sc-154565-V.

Molecular Weight of TP53INP2: 24 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 or our catalog for detailed protocols and support products.