SANTA CRUZ BIOTECHNOLOGY, INC.

PITHD1 (A-10): sc-515392

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PITHD1 (PITH (C-terminal proteasome-interacting domain of thioredoxin-like) domain containing 1), also known as HT014, TXNL1CL or C1orf128, is a 211 amino acid nuclear protein containing one PITH domain. PITHD1 ectopic expression is thought to promote megakaryocytic differentiation and increase RUNX1 expression, while knockdown of PITHD1 was observed to have the opposite effect on both differentiation and RUNX1 expression. PITHD1 may regulate RUNX1 expression in two distinct fashions, by increasing transcription activity of proximal promoter and enhancing translational activity of an IRES element. Altered gene expression of the PITHD1 gene has been associated with leukemia development, with significant downregulation of expression observed in leukemic samples. The PITHD1 gene maps to chromosome 1 and is conserved in chimpanzee, Rhesus monkey, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans, S. pombe, M. oryzae, N. crassa, A. thaliana,* rice, and frog.

REFERENCES

1. Guo, D., et al. 2005. Proteomic analysis of SUMO4 substrates in HEK293 cells under serum starvation-induced stress. Biochem. Biophys. Res. Commun. 337: 1308-1318.
2. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
3. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
4. Abdelmohsen, K., et al. 2009. Ubiquitin-mediated proteolysis of HuR by heat shock. EMBO J. 28: 1271-1282.
5. de Mateo, S., et al. 2011. Proteomic characterization of the human sperm nucleus. Proteomics 11: 2714-2726.

CHROMOSOMAL LOCATION

Genetic locus: PITHD1 (human) mapping to 1p36.11; Pithd1 (mouse) mapping to 4 D3.

SOURCE

PITHD1 (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-26 near the N-terminus of PITHD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515392 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

PITHD1 (A-10) is recommended for detection of PITHD1 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 PITHD1 siRNA (h): sc-88421, PITHD1 siRNA (m): sc-108185, PITHD1 shRNA Plasmid (h): sc-88421-SH, PITHD1 shRNA Plasmid (m): sc-108185-SH, PITHD1 shRNA (h) Lentiviral Particles: sc-88421-V and PITHD1 shRNA (m) Lentiviral Particles: sc-108185-V.

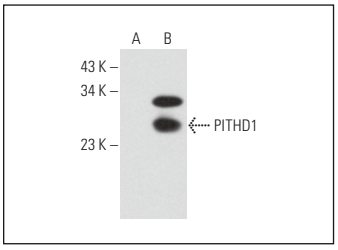
Molecular Weight of PITHD1: 24 kDa.

Positive Controls: PITHD1 (h): 293T Lysate: sc-115723.

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.

DATA



PITHD1 (A-10): sc-515392. Western blot analysis of PITHD1 expression in non-transfected: sc-117752 (**A**) and human PITHD1 transfected: sc-175723 (**B**) 293T whole cell lysates.

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.