SANTA CRUZ BIOTECHNOLOGY, INC.

PNO1 (A-3): sc-514905

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PNO1 (partner of NOB1), also known as KHRBP1, is a 252 amino acid protein that localizes to the nucleolus and contains one KH domain. Expressed in a variety of tissues, including kidney, lung, liver and spleen, with lower levels present in brain, heart, colon and skeletal muscle, PNO1 may play a role in RNA binding events during transcription or translation. The gene encoding PNO1 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
2. Zhou, G.J., et al. 2004. Cloning and characterization of a novel human RNA binding protein gene PNO1. DNA Seq. 15: 219-224.
3. Zhang, Y., et al. 2005. Cloning, expression and characterization of the human NOB1 gene. Mol. Biol. Rep. 32: 185-189.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
6. Marshall, J.D., et al. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
7. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28: 1114-1123.

CHROMOSOMAL LOCATION

Genetic locus: PNO1 (human) mapping to 2p14; Pno1 (mouse) mapping to 11 A2.

SOURCE

PNO1 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 170-192 within an internal region of PNO1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-514905 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PNO1 (A-3) is recommended for detection of PNO1 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 PNO1 siRNA (h): sc-94365, PNO1 siRNA (m): sc-152359, PNO1 shRNA Plasmid (h): sc-94365-SH, PNO1 shRNA Plasmid (m): sc-152359-SH, PNO1 shRNA (h) Lentiviral Particles: sc-94365-V and PNO1 shRNA (m) Lentiviral Particles: sc-152359-V.

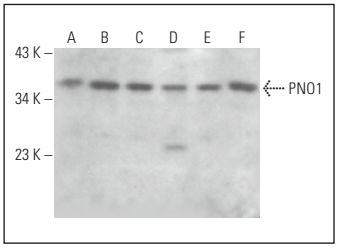
Molecular Weight of PNO1: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, RT-4 whole cell lysate: sc-364257 or K-562 whole cell lysate: sc-2203.

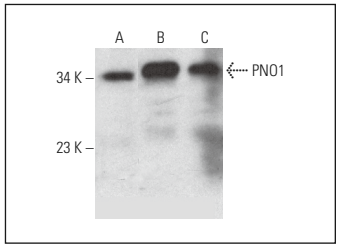
RECOMMENDED SUPPORT REAGENTS

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



PNO1 (A-3): sc-514905. Western blot analysis of PNO1 expression in HeLa (**A**), Jurkat (**B**), K-562 (**C**), Hep G2 (**D**), HL-60 (**E**) and RAW 264.7 (**F**) whole cell lysates.



PNO1 (A-3): sc-514905. Western blot analysis of PNO1 expression in RT-4 (**A**), K-562 (**B**) and HeLa (**C**) whole cell lysates.

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.