

PTCD1 (Y-13): sc-138554

BACKGROUND

PTCD1 (pentatricopeptide repeat domain 1) is a 700 amino acid protein that contains 9 PPR (pentatricopeptide) repeats and is encoded by a gene that maps to human chromosome 7q22.1. Chromosome 7 houses over 1,000 genes and comprises nearly 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfourt and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

1. Tspirouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
3. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
4. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular. Med.* 8: 547-565.
5. Gilbert-Dussardier, B. 2006. Williams-Beuren syndrome. *Rev. Prat.* 56: 2102-2106.
6. Delannoy, E., et al. 2007. Pentatricopeptide repeat (PPR) proteins as sequence-specificity factors in post-transcriptional processes in organelles. *Biochem. Soc. Trans.* 35: 1643-1647.
7. Leone, G., et al. 2007. Therapy-related leukemia and myelodysplasia: susceptibility and incidence. *Haematologica* 92: 1389-1398.

CHROMOSOMAL LOCATION

Genetic locus: PTCD1 (human) mapping to 7q22.1; Ptcd1 (mouse) mapping to 5 G2.

SOURCE

PTCD1 (Y-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PTCD1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138554 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTCD1 (Y-13) is recommended for detection of PTCD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with PTCD2 or PTCD3.

PTCD1 (Y-13) is also recommended for detection of PTCD1 in additional species, including equine and canine.

Suitable for use as control antibody for PTCD1 siRNA (h): sc-89388, PTCD1 siRNA (m): sc-152571, PTCD1 shRNA Plasmid (h): sc-89388-SH, PTCD1 shRNA Plasmid (m): sc-152571-SH, PTCD1 shRNA (h) Lentiviral Particles: sc-89388-V and PTCD1 shRNA (m) Lentiviral Particles: sc-152571-V.

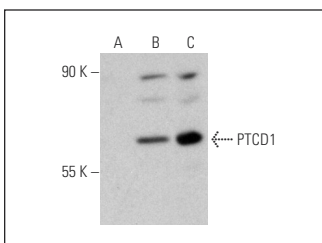
Molecular Weight of PTCD1: 79 kDa.

Positive Controls: PTCD1 (h): 293T Lysate: sc-110616 or U-251-MG whole cell lysate: sc-364176.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PTCD1 (Y-13): sc-138554. Western blot analysis of PTCD1 expression in non-transfected 293T: sc-117752 (A), human PTCD1 transfected 293T: sc-110616 (B) and U-251-MG (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.