

# PTCHD2 (Q-12): sc-162051

## BACKGROUND

PTCHD2 (patched domain containing 2), also known as protein dispatched homolog 3 or DISP3, is a 1,392 amino acid multi-pass membrane protein that contains one SSD (sterol-sensing) domain and belongs to the patched family. Expressed in retina, brain and testis, PTCHD2 localizes to endoplasmic reticulum and colocalizes with cholesterol. PTCHD2 overexpression leads to increased cholesterol levels, suggesting that PTCHD2 may play a role in cholesterol homeostasis. PTCHD2 is further hypothesized to act as a link between thyroid hormone and cholesterol metabolism. Existing as two alternatively spliced isoforms, PTCHD2 is thought to assist in the release of lipid-anchored secreted proteins and is encoded by a gene that maps to human chromosome 1p36.22.

## REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
2. Katoh, Y., et al. 2005. Hedgehog signaling pathway and gastric cancer. Cancer Biol. Ther. 4: 1050-1054.
3. Katoh, Y., et al. 2005. Identification and characterization of DISP3 gene in silico. Int. J. Oncol. 26: 551-556.
4. Peart, M.J., et al. 2005. Identification and functional significance of genes regulated by structurally different histone deacetylase inhibitors. Proc. Natl. Acad. Sci. USA 102: 3697-3702.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611251. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Zikova, M., et al. 2009. DISP3, a sterol-sensing domain-containing protein that links thyroid hormone action and cholesterol metabolism. Mol. Endocrinol. 23: 520-528.

## CHROMOSOMAL LOCATION

Genetic locus: PTCHD2 (human) mapping to 1p36.22; Ptchd2 (mouse) mapping to 4 E2.

## SOURCE

PTCHD2 (Q-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PTCHD2 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-162051 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PTCHD2 (Q-12) is recommended for detection of PTCHD2 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); non cross-reactive with PTCHD1 or PTCHD3.

PTCHD2 (Q-12) is also recommended for detection of PTCHD2 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for PTCHD2 siRNA (h): sc-88803, PTCHD2 siRNA (m): sc-152575, PTCHD2 shRNA Plasmid (h): sc-88803-SH, PTCHD2 shRNA Plasmid (m): sc-152575-SH, PTCHD2 shRNA (h) Lentiviral Particles: sc-88803-V and PTCHD2 shRNA (m) Lentiviral Particles: sc-152575-V.

Molecular Weight of PTCHD2 isoforms: 153/104 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.