

CNIH2 (P-15): sc-167509

BACKGROUND

CNIH2 (cornichon homolog 2), also known as Cnih or cornichon-like protein, is a 160 amino acid multi-pass membrane protein that belongs to the cornichon family and plays a role in protein maturation and transport. Like its *Drosophila* homolog, CNIH2 contains a predicted C-terminal cytoplasmic COPII-interacting domain and three putative transmembrane domains. The gene encoding CNIH2 maps to human chromosome 11, which comprises approximately 4% of human genomic DNA and is considered a gene and disease association dense chromosome. The chromosome 11 encoded *Atm* gene is important for regulation of cell cycle arrest and apoptosis following double strand DNA breaks. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11-encoded genes.

REFERENCES

1. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
3. Bökel, C., et al. 2006. *Drosophila* Cornichon acts as cargo receptor for ER export of the TGF α -like growth factor Gurken. *Development* 133: 459-470.
4. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.
5. Hoshino, H., et al. 2007. Cornichon-like protein facilitates secretion of HB-EGF and regulates proper development of cranial nerves. *Mol. Biol. Cell* 18: 1143-1152.
6. Bhuiyan, Z.A., et al. 2008. An intronic mutation leading to incomplete skipping of exon-2 in KCNQ1 rescues hearing in Jervell and Lange-Nielsen syndrome. *Prog. Biophys. Mol. Biol.* 98: 319-327.
7. Coldren, C.D., et al. 2009. Chromosomal microarray mapping suggests a role for BSX and Neurogranin in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). *Neurogenetics* 10: 89-95.
8. Schwenk, J., et al. 2009. Functional proteomics identify cornichon proteins as auxiliary subunits of AMPA receptors. *Science* 323: 1313-1319.
9. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 611288. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CNIH2 (human) mapping to 11q13.2; Cnih2 (mouse) mapping to 19 A.

SOURCE

CNIH2 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of CNIH2 of human origin.

PRODUCT

Each vial contains 200 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-167509 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CNIH2 (P-15) is recommended for detection of CNIH2 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 CNIH, CNIH3 or CNIH4.

CNIH2 (P-15) is also recommended for detection of CNIH2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CNIH2 siRNA (h): sc-96410, CNIH2 siRNA (m): sc-142430, CNIH2 shRNA Plasmid (h): sc-96410-SH, CNIH2 shRNA Plasmid (m): sc-142430-SH, CNIH2 shRNA (h) Lentiviral Particles: sc-96410-V and CNIH2 shRNA (m) Lentiviral Particles: sc-142430-V.

Molecular Weight of CNIH2: 19 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.

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 or our catalog for detailed protocols and support products.