

CNIH (D-12): sc-164070

BACKGROUND

CNIH, also known as cornichon homolog, CNIL, TGAM77 (T-cell growth-associated molecule 77) or CNIH1, is a 144 amino acid multi-pass membrane protein of the Golgi apparatus and endoplasmic reticulum. A member of the cornichon family, CNIH shares 63% sequence similarity with its *Drosophila* homolog and is highly expressed in liver, heart, pancreas, skeletal muscle, stomach, lymph node, thymus, ovary, placenta, brain and fetal liver. CNIH assists in maturation and selective transport of TGF α (transforming growth factor- α) family members and is encoded by a gene that maps to human chromosome 14q22.2. Chromosome 14 houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the Presenilin 1 (PSEN1) gene, which is one of the 3 key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. Utku, N., et al. 1999. The human homolog of *Drosophila* cornichon protein is differentially expressed in alloactivated T-cells. *Biochim. Biophys. Acta* 1449: 203-210.
2. 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.
3. Castro, C.P., et al. 2007. Cornichon regulates transport and secretion of TGF α -related proteins in metazoan cells. *J. Cell Sci.* 120: 2454-2466.
4. Larner, A.J., et al. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
5. Schwenk, J., et al. 2009. Functional proteomics identify cornichon proteins as auxiliary subunits of AMPA receptors. *Science* 323: 1313-1319.
6. Topic, A., et al. 2009. α -1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.
7. Online Mendelian Inheritance in Man, OMIM[™]. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 611287. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CNIH (human) mapping to 14q22.2; Cnih (mouse) mapping to 14 C1.

SOURCE

CNIH (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CNIH 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-164070 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CNIH (D-12) is recommended for detection of CNIH 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); may cross-react with CNIH2; non cross-reactive with CNIH3 or CNIH4.

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

Suitable for use as control antibody for CNIH siRNA (h): sc-92298, CNIH siRNA (m): sc-142429, CNIH shRNA Plasmid (h): sc-92298-SH, CNIH shRNA Plasmid (m): sc-142429-SH, CNIH shRNA (h) Lentiviral Particles: sc-92298-V and CNIH shRNA (m) Lentiviral Particles: sc-142429-V.

Molecular Weight of CNIH: 17 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.