

# KLHDC2 (P-14): sc-162991

## BACKGROUND

KLHDC2 (kelch domain-containing protein 2), also known as HCA33 (hepatocellular carcinoma-associated antigen 33) or HCLP-1 (host cell factor-like protein 1), is a 406 amino acid protein that contains 6 kelch repeats. Localizing to the nucleus, KLHDC2 is widely expressed, with high levels found in muscle, heart, pancreas and liver. KLHDC2 interacts directly with CREB3, repressing CREB3-mediated transcription. Existing as 2 alternatively spliced isoforms, the gene encoding KLHDC2 maps to human chromosome 14, which 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  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

- Zhou, H.J., Wong, C.M., Chen, J.H., Qiang, B.Q., Yuan, J.G. and Jin, D.Y. 2001. Inhibition of LZIP-mediated transcription through direct interaction with a novel host cell factor-like protein. *J. Biol. Chem.* 276: 28933-28938.
- Avramopoulos, D., Fallin, M.D. and Bassett, S.S. 2005. Linkage to chromosome 14q in Alzheimer's disease (AD) patients without psychotic symptoms. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 132B: 9-13.
- Chin, K.T., Xu, H.T., Ching, Y.P. and Jin, D.Y. 2007. Differential subcellular localization and activity of kelch repeat proteins KLHDC1 and KLHDC2. *Mol. Cell. Biochem.* 296: 109-119.
- Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
- Topic, A., Alempijevic, T., Milutinovic, A.S. and Kovacevic, N. 2009.  $\alpha$ -1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.

## CHROMOSOMAL LOCATION

Genetic locus: KLHDC2 (human) mapping to 14q21.3; Klhdc2 (mouse) mapping to 12 C2.

## SOURCE

KLHDC2 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KLHDC2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162991 P, (100  $\mu$ g 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

KLHDC2 (P-14) is recommended for detection of KLHDC2 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 other KLHDC family members.

KLHDC2 (P-14) is also recommended for detection of KLHDC2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KLHDC2 siRNA (h): sc-92163, KLHDC2 siRNA (m): sc-146501, KLHDC2 shRNA Plasmid (h): sc-92163-SH, KLHDC2 shRNA Plasmid (m): sc-146501-SH, KLHDC2 shRNA (h) Lentiviral Particles: sc-92163-V and KLHDC2 shRNA (m) Lentiviral Particles: sc-146501-V.

Molecular Weight of KLHDC2 isoforms 1/2: 46/28 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.

## 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.