

# CH25H (H-41): sc-135228

## BACKGROUND

CH25H (cholesterol 25-hydroxylase), also known as h250H, is a 272 amino acid endoplasmic membrane protein that belongs to the sterol desaturase family. CH25H contains clusters of histidine residues essential for catalytic activity and is involved in cholesterol and lipid metabolism. CH25H catalyzes the formation of 25-hydroxycholesterol from cholesterol, leading to the repression of cholesterol biosynthetic enzymes. CH25H regulates lipid metabolism by synthesizing a corepressor that blocks sterol regulatory element binding protein (SREBP) processing. CH25H utilizes diiron cofactors to catalyze the hydroxylation of hydrophobic substrates.

## REFERENCES

- Riemenschneider, M., et al. 2004. Association analysis of genes involved in cholesterol metabolism located within the linkage region on chromosome 10 and Alzheimer's disease. *Neurobiol. Aging* 25: 1305-1308.
- Papassotiropoulos, A., et al. 2005. Cholesterol 25-hydroxylase on chromosome 10q is a susceptibility gene for sporadic Alzheimer's disease. *Neurodegener. Dis.* 2: 233-241.
- Wang, J.H. and Tuohimaa, P. 2006. Regulation of cholesterol 25-hydroxylase expression by vitamin D<sub>3</sub> metabolites in human prostate stromal cells. *Biochem. Biophys. Res. Commun.* 345: 720-725.
- Shibata, N., et al. 2006. Association studies of cholesterol metabolism genes (CH25H, ABCA1 and CH24H) in Alzheimer's disease. *Neurosci. Lett.* 391: 142-146.
- Morgan, A.R., et al. 2007. Association studies of 23 positional/functional candidate genes on chromosome 10 in late-onset Alzheimer's disease. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 144B: 762-770.
- Carter, C.J. 2007. Convergence of genes implicated in Alzheimer's disease on the cerebral cholesterol shuttle: APP, cholesterol, lipoproteins, and atherosclerosis. *Neurochem. Int.* 50: 12-38.
- Schjeide, B.M., et al. 2009. Assessment of Alzheimer's disease case-control associations using family-based methods. *Neurogenetics* 10: 19-25.

## CHROMOSOMAL LOCATION

Genetic locus: CH25H (human) mapping to 10q23.31; Ch25h (mouse) mapping to 19 C1.

## SOURCE

CH25H (H-41) is a rabbit polyclonal antibody raised against amino acids 83-123 mapping within an internal region of CH25H 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.

## STORAGE

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

## APPLICATIONS

CH25H (H-41) is recommended for detection of CH25H of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

CH25H (H-41) is also recommended for detection of CH25H in additional species, including bovine and porcine.

Suitable for use as control antibody for CH25H siRNA (h): sc-90679, CH25H siRNA (m): sc-142309, CH25H shRNA Plasmid (h): sc-90679-SH, CH25H shRNA Plasmid (m): sc-142309-SH, CH25H shRNA (h) Lentiviral Particles: sc-90679-V and CH25H shRNA (m) Lentiviral Particles: sc-142309-V.

Molecular Weight (predicted) of CH25H: 32 kDa.

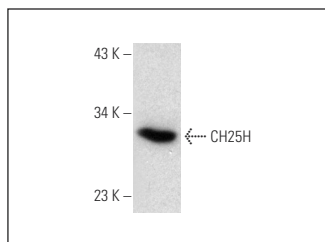
Molecular Weight (observed) of CH25H: 36 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

## 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



CH25H (H-41): sc-135228. Western blot analysis of CH25H expression in c4 whole cell lysate.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **CH25H (1G8): sc-293256**, our highly recommended monoclonal alternative to CH25H (H-41).