



## COL25A1 (N-16): sc-46870

### BACKGROUND

Collagen proteins, products of the COL gene family, are fibrous, extracellular matrix proteins with high tensile strength and are the major components of connective tissue such as tendons and cartilage. All collagens contain a triple helix domain and frequently show lateral self-association in order to form complex connective tissues. The Collagen Type XXV precursor produces the proteolytic fragment CLAC (collagenous Alzheimer amyloid plaque component), which deposits in senile plaques associated with amyloid  $\beta$  peptides ( $A\beta$ ) in the brains of patients with Alzheimer's disease. CLAC binds to the fibrillized form of  $A\beta$ , which disturbs the structure and function of plasma membranes.

### REFERENCES

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2. Verdier, Y. and Penke, B. 2004. Binding sites of  $\beta$ -Amyloid peptide in cell plasma membrane and implications for Alzheimer's disease. *Curr. Protein Pept. Sci.* 5: 19-31.
3. Verdier, Y., Zarándi, M. and Penke, B. 2004.  $\beta$ -Amyloid peptide interactions with neuronal and glial cell plasma membrane: binding sites and implications for Alzheimers disease. *J. Pept. Sci.* 10: 229-248.
4. Soderberg, L., Dahlqvist, C., Kakuyama, H., Thyberg, J., Ito, A., Winblad, B., Naslund, J. and Tjernberg, L.O. 2005. Collagenous Alzheimer amyloid plaque component assembles amyloid fibrils into protease resistant aggregates. *FEBS J.* 272: 2231-2236.
5. Soderberg, L., Kakuyama, H., Moller, A., Ito, A., Winblad, B., Tjernberg, L.O. and Naslund, J. 2005. Characterization of the Alzheimers disease-associated CLAC protein and identification of an  $\beta$ -Amyloid peptide-binding site. *J. Biol. Chem.* 280: 1007-1015.
6. Osada, Y., Hashimoto, T., Nishimura, A., Matsuo, Y., Wakabayashi, T. and Iwatsubo, T. 2005. CLAC binds to  $\beta$ -Amyloid peptides through the positively charged amino acid cluster within the collagenous domain 1 and inhibits formation of amyloid fibrils. *J. Biol. Chem.* 280: 8596-8605.

### CHROMOSOMAL LOCATION

Genetic locus: COL25A1 (human) mapping to 4q25; Col25a1 (mouse) mapping to 3 H1.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### SOURCE

COL25A1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Collagen Type XXV 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-46870 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

COL25A1 (N-16) is recommended for detection of Collagen Type XXV of 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).

Suitable for use as control antibody for COL25A1 siRNA (h): sc-60429.

Molecular Weight of COL25A1: 110 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.