SANTA CRUZ BIOTECHNOLOGY, INC.

synphilin-1 (L-20): sc-34193

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The Power to Question

BACKGROUND

synphilin-1 (α synuclein interacting protein, SNCAIP) is a 919 amino acid protein that associates with α synuclein and promotes the formation of cytosolic inclusions in neuronal cells. The synuclein family members, including α-synuclein and β-synuclein, are predominantly expressed in the brain where they influence synaptic regulation and neuronal plasticity. synphilin-1 contains modular protein domains, such as ankyrin-like repeats and a coiled-coil domain. While both α-synuclein and synphilin-1 are co-expressed in Lewy bodies of patients with Parkinson's disease (PD), only mutations in the gene for α-synuclein have been determined to confer pathogenicity.

REFERENCES

1. Ueda, K., Fukushima, H., Masliah, E., Xia, Y., Iwai, A., Yoshimoto, M., Otero, D.A., Kondo, J., Ihara, Y. and Saitoh, T. 1993. Molecular cloning of cDNA encoding an unrecognized component of amyloid in Alzheimer disease. Proc. Natl. Acad. Sci. USA 90: 11282-11286.
2. Jakes, R., Spillantini, M. and Goedert, M. 1994. Identification of two distinct synucleins from human brain. FEBS Lett. 345: 27-32.
3. Engelender, S., Kaminsky, Z., Guo, X., Sharp, A. H., Amaravi, R.K., Kleiderlein, J.J., Margolis, R.L., Troncoso, J.C., Lanahan, A.A., Worley, P.F., Dawson, V.L., Dawson, T.M. and Ross, C.A. 1999. Synphilin-1 associates with α-synuclein and promotes the formation of cytosolic inclusions. Nat. Genet. 22: 110-114.
4. Wakabayashi, K., Engelender, S., Yoshimoto, M., Tsuji, S., Ross, C.A. and Takahashi, H. 2000. Synphilin-1 is present in Lewy bodies in Parkinson's disease. Ann. Neurol. 47: 521-523.
5. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603779. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Kawamata, H., McLean, P. J., Sharma, N. and Hyman, B.T. 2001. Interaction of α-synuclein and synphilin-1: effect of Parkinson's disease-associated mutations. J. Neurochem. 77: 929-934.
7. Farrer, M., Destee, A., Levecque, C., Singleton, A., Engelender, S., Becquet, E., Mouroux, V., Richard, F., Defebvre, L., Crook, R., Hernandez, D., Ross, C. A., Hardy, J., Amouyel, P. and Chartier-Harlin, M.C. 2001. Genetic analysis of synphilin-1 in familial Parkinson's disease. Neurobiol. Dis. 8: 317-323.

CHROMOSOMAL LOCATION

Genetic locus: SNCAIP (human) mapping to 5q23.2; Sncaip (mouse) mapping to 18 D1.

SOURCE

synphilin-1 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of synphilin-1 of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34193 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

synphilin-1 (L-20) is recommended for detection of synphilin-1 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).

synphilin-1 (L-20) is also recommended for detection of synphilin-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for synphilin-1 siRNA (h): sc-43434, synphilin-1 siRNA (m): sc-45293, synphilin-1 shRNA Plasmid (h): sc-43434-SH, synphilin-1 shRNA Plasmid (m): sc-45293-SH, synphilin-1 shRNA (h) Lentiviral Particles: sc-43434-V and synphilin-1 shRNA (m) Lentiviral Particles: sc-45293-V.

Molecular Weight of synphilin-1: 100 kDa.

Positive Controls: Mouse brain extract: sc-2253.

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 or our catalog for detailed protocols and support products.