

p- α -synuclein (Ser 87)-R: sc-19893-R

BACKGROUND

Synucleins are a novel class of GRK substrates. Synucleins (α , β , γ and synoretin) are highly expressed in brain, but are also found in numerous other tissues. The synuclein family members, including α -synuclein, are speculated to be involved in synaptic regulation and neuronal plasticity. α -synuclein, also designated NACP, PD1, PARK1 and SNCA, is localized to neuronal cell bodies and synapses and has been implicated in the pathogenesis of several neurodegenerative disorders including Alzheimer's and Parkinson's diseases. α -synuclein is phosphorylated on Serine residues Ser 129 and Ser 87. In addition, α -synuclein exists in a glycosylated form. The human α -synuclein gene maps to chromosome 4q21.

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. Iwai, A., Masliah, E., Yoshimoto, M., Ge, N., Flanagan, L., de Silva, H.A., Kittel, A. and Saitoh, T. 1995. The precursor protein of non-A β component of Alzheimer's disease amyloid is a presynaptic protein of the central nervous system. Neuron 14: 467-475.
4. Polymeropoulos, M.H., Lavedan, C., Leroy, E., Ide, S.E., Dehejia, A., Dutra, A., Pike, B., Root, H., Rubenstein, J., Boyer, R., Stenroos, E.S., Chandra-sekhappara, S., Athanassiadou, A., Papapetropoulos, T., Johnson, W.G., Lazzarini, A.M., Duvoisin, R.C., Di Iorio, G., Golbe, L.I. and Nussbaum, R.L. 1997. Mutation in the α -synuclein gene identified in families with Parkinson's disease. Science 276: 2045-2047.
5. Okochi, M., Walter, J., Koyama, A., Nakajo, S., Baba, M., Iwatsubo, T., Meijer, L., Kahle, P.J. and Haass, C. 2000. Constitutive phosphorylation of the Parkinson's disease associated α -synuclein. J. Biol. Chem. 275: 390-397.
6. Pronin, A.N., Morris, A.J., Surguchov, A. and Benovic, J.L. 2000. Synucleins are a novel class of substrates for G protein-coupled receptor kinases. J. Biol. Chem. 275: 26515-26522.

CHROMOSOMAL LOCATION

Genetic locus: SNCA (human) mapping to 4q21.

STORAGE

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

SOURCE

p- α -synuclein (Ser 87)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 87 phosphorylated α -synuclein 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-19893 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p- α -synuclein (Ser 87) is recommended for detection of Ser 87 phosphorylated α -synuclein 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p- α -synuclein (Ser 87)-R is also recommended for detection of correspondingly phosphorylated α -synuclein in additional species, including canine, bovine and porcine.

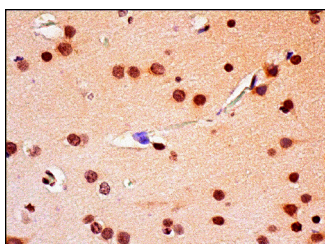
Suitable for use as control antibody for α -synuclein siRNA (h): sc-29619, α -synuclein shRNA Plasmid (h): sc-29619-SH and α -synuclein shRNA (h) Lentiviral Particles: sc-29619-V.

Molecular Weight of p- α -synuclein: 14 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



p- α -synuclein (Ser 87)-R: sc-19893-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells and glial cells.

RESEARCH USE

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