

p- α -synuclein (Ser 129): sc-135638

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 neuro-degenerative 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 4q22.1.

REFERENCES

1. Ueda, K., et al. 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., et al. 1994. Identification of two distinct synucleins from human brain. *FEBS Lett.* 345: 27-32.
3. Iwai, A., et al. 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., et al. 1997. Mutation in the α -synuclein gene identified in families with Parkinson's disease. *Science* 276: 2045-2047.
5. Pronin, A.N., et al. 2000. Synucleins are a novel class of substrates for G protein-coupled receptor kinases. *J. Biol. Chem.* 275: 26515-26522.
6. Okochi, M., et al. 2000. Constitutive phosphorylation of the Parkinson's disease associated α -synuclein. *J. Biol. Chem.* 275: 390-397.

CHROMSOMAL LOCATION

Genetic locus: SNCA (human) mapping to 4q22.1; Snca (mouse) mapping to 6 B3.

SOURCE

p- α -synuclein (Ser 129) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 129 phosphorylated α -synuclein of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

p- α -synuclein (Ser 129) is recommended for detection of Ser 129 phosphorylated α -synuclein of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

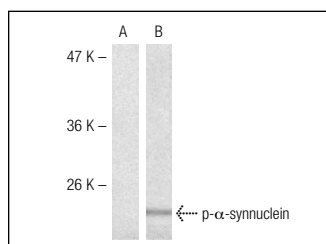
Suitable for use as control antibody for α -synuclein siRNA (h): sc-29619, α -synuclein siRNA (m): sc-42286, α -synuclein shRNA Plasmid (h): sc-29619-SH, α -synuclein shRNA Plasmid (m): sc-42286-SH, α -synuclein shRNA (h) Lentiviral Particles: sc-29619-V and α -synuclein shRNA (m) Lentiviral Particles: sc-42286-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 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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Western blot analysis of phosphorylated α -synuclein expression in mouse brain tissues. Blots were probed with p- α -synuclein (Ser 129): sc-135638 preincubated with cognate phosphorylated peptide (**A**) and p- α -synuclein (Ser 129): sc-135638 (**B**).

SELECT PRODUCT CITATIONS

1. Wills, J., et al. 2011. Tauopathic changes in the striatum of A53T α -synuclein mutant mouse model of Parkinson's disease. *PLoS ONE* 6: e17953.
2. Pieri, L., et al. 2016. Cellular response of human neuroblastoma cells to α -synuclein fibrils, the main constituent of Lewy bodies. *Biochim. Biophys. Acta* 1860: 8-19.

RESEARCH USE

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