SANTA CRUZ BIOTECHNOLOGY, INC.

α/β-synuclein (N-19): sc-7012

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The synucleins, including α-synuclein (also designated NACP for nonamyloid component precursor), β-synuclein (also designated PNP 14 for phospho-neuroprotein 14) and γ-synuclein (also designated persyn or BCSG1 for breast cancer-specific gene 1) are presynaptic proteins abundant in neurons. Synucleins are predominantly expressed in the brain and are speculated to be involved in synaptic regulation and neuronal plasticity. α-synuclein, identified as a component of Alzheimer's disease amyloid plaques, is localized to neuronal cell bodies and synapses. Coordinate expression of α-synuclein and β-synuclein may be important during hematopoetic cell differentiation. A mutant form of α-synuclein is found in patients with early onset Parkinson's disease. γ-synuclein is associated with axonal pathology in Parkinson's disease.

CHROMOSOMAL LOCATION

Genetic locus: SNCA (human) mapping to 4q22.1, SNCB (human) mapping to 5q35.2; Snca (mouse) mapping to 6 B3, Sncb (mouse) mapping to 13 B1.

SOURCE

α/β-synuclein (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of α-synuclein of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7012 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α/β-synuclein (N-19) is recommended for detection of α-synuclein and β-synuclein 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).

α/β-synuclein (N-19) is also recommended for detection of α-synuclein and β-synuclein in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of α/β-synuclein: 19 kDa.

Positive Controls: β-synuclein (h2): 293T Lysate: sc-159500, mouse brain extract: sc-2253 or SK-N-MC cell lysate: sc-2237.

STORAGE

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

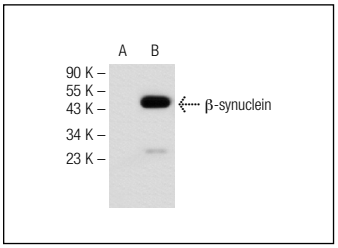
PROTOCOLS

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

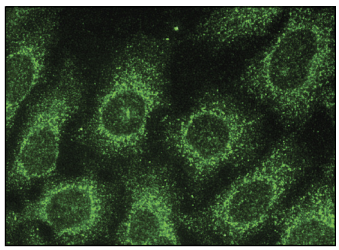
RESEARCH USE

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

DATA



α/β-synuclein (N-19): sc-7012. Western blot analysis of β-synuclein expression in non-transfected: sc-117752 (**A**) and human β-synuclein transfected: sc-159500 (**B**) 293T whole cell lysates.



α/β-synuclein (N-19): sc-7012. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Sharma, N., et al. 2001. A close association of TorsinA and α-synuclein in Lewy bodies: a fluorescence resonance energy transfer study. Am. J. Pathol. 159: 339-344.
2. Sharma, N., et al. 2001. α-synuclein has an altered conformation and shows a tight intermolecular interaction with ubiquitin in Lewy bodies. Acta Neuropathol. 102: 329-334.
3. Katsuse, O., et al. 2003. Developmental stages of cortical Lewy bodies and their relation to axonal transport blockage in brains of patients with dementia with Lewy bodies. J. Neurol. Sci. 211: 29-35.
4. Moussa, C.E., et al. 2004. Abnormal migration of human wild-type α-synuclein upon gel electrophoresis. Neurosci. Lett. 371: 239-243.
5. Moussa, C.E., et al. 2008. Dopamine differentially induces aggregation of A53T mutant and wild type α-synuclein: insights into the protein chemistry of Parkinson's disease. Biochem. Biophys. Res. Commun. 365: 833-839.
6. Shimada, A., et al. 2008. Limbic structures are prone to age-related impairments in proteasome activity and neuronal ubiquitinated inclusions in SAMP10 mouse: a model of cerebral degeneration. Neuropathol. Appl. Neurobiol. 34: 33-51.
7. Hasadsri, L., et al. 2009. Functional protein delivery into neurons using polymeric nanoparticles. J. Biol. Chem. 124: 6972-6981.
8. Geng, X., et al. 2011. α-Synuclein binds the K(ATP) channel at Insulin-secretory granules and inhibits Insulin secretion. Am. J. Physiol. Endocrinol. Metab. 300: E276-E286.

MONOS Satisfaction Guaranteed

Try **α/β-synuclein (F-11): sc-514908** or **α/β-synuclein (3B6): sc-69699**, our highly recommended monoclonal alternatives to α/β-synuclein (N-19).