SANTA CRUZ BIOTECHNOLOGY, INC.

α-synuclein (3H2897): sc-69977

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The synuclein family members, including α-synuclein (also designated NACP for non-β-Amyloid component) and β-synuclein, are predominantly expressed in the brain and are speculated to be involved in synaptic regulation and neuronal plasticity. α-synuclein is localized to neuronal cell bodies and synapses. α-synuclein was first identified as a component of Alzheimer's disease amyloid plaques. Abnormal platelet function in Alzheimer's disease has been demonstrated. During megakaryocytic differentiation, α-synuclein has been found to be upregulated, while β-synuclein is downregulated, indicating that coordinate expression of synucleins may be important during hematopoetic cell differentiation. A mutant form of α-synuclein has been found in patients with early onset Parkinson's disease.

CHROMOSOMAL LOCATION

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

SOURCE

α-synuclein (3H2897) is a mouse monoclonal antibody raised against recombinant α-synuclein of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α-synuclein (3H2897) is recommended for detection of α-synuclein of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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 α-synuclein: 19 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, α-synuclein (h): 293T lysate: sc-111729 or IMR-32 cell lysate: sc-2409.

STORAGE

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

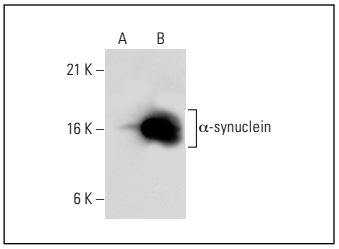
PROTOCOLS

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

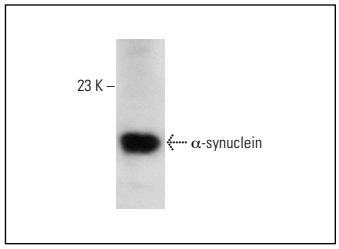
RESEARCH USE

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

DATA



α-synuclein (3H2897): sc-69977. Western blot analysis of α-synuclein expression in non-transfected: sc-117752 (**A**) and human α-synuclein transfected: sc-111729 (**B**) 293T whole cell lysates.



α-synuclein (3H2897): sc-69977. Western blot analysis of α-synuclein expression in IMR-32 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Schiess, M.C., et al. 2010. CSF from Parkinson disease patients differentially affects cultured microglia and astrocytes. BMC Neurosci. 11: 151.
2. Deleersnijder, A., et al. 2011. Comparative analysis of different peptidyl-prolyl isomerases reveals FK506-binding protein 12 as the most potent enhancer of α-synuclein aggregation. J. Biol. Chem. 286: 26687-26701.
3. Hoseini, S.G., et al. 2012. Regulatory T-cell profile in early and late lesions of cutaneous leishmaniasis due to *Leishmania major*. J. Res. Med. Sci. 17: 513-518.
4. Liu, Y., et al. 2015. Environment-contact administration of rotenone: a new rodent model of Parkinson's disease. Behav. Brain Res. 294: 149-161.
5. Xuan, Q., et al. 2016. Post-translational modifications of α-synuclein contribute to neurodegeneration in the colon of elderly individuals. Mol. Med. Rep. 13: 5077-5083.
6. Kim, J.S., et al. 2017. α-synuclein in the colon and premotor markers of Parkinson disease in neurologically normal subjects. Neurol. Sci. 38: 171-179.
7. Erustes, A.G., et al. 2018. Overexpression of α-synuclein in an astrocyte cell line promotes autophagy inhibition and apoptosis. J. Neurosci. Res. 96: 160-171.
8. Wang, Z.H., et al. 2018. BDNF inhibits neurodegenerative disease-associated asparaginyl endopeptidase activity via phosphorylation by Akt. JCI Insight 3: e99007.
9. Rahimi-Balaei, M., et al. 2019. Loss of prostatic acid phosphatase and α-synuclein cause motor circuit degeneration without altering cerebellar patterning. PLoS ONE 14: e0222234.

CONJUGATES

See **α-synuclein (211): sc-12767** for α-synuclein antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.