

α -synuclein (Syn 204): sc-32280

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 hematopoietic 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.

SOURCE

α -synuclein (Syn 204) is a mouse monoclonal antibody raised against human recombinant α -synuclein.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α -synuclein (Syn 204) is available conjugated to agarose (sc-32280 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32280 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32280 PE), fluorescein (sc-32280 FITC), Alexa Fluor[®] 488 (sc-32280 AF488), Alexa Fluor[®] 546 (sc-32280 AF546), Alexa Fluor[®] 594 (sc-32280 AF594) or Alexa Fluor[®] 647 (sc-32280 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-32280 AF680) or Alexa Fluor[®] 790 (sc-32280 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

α -synuclein (Syn 204) is recommended for detection of α -synuclein of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 shRNA Plasmid (h): sc-29619-SH and α -synuclein shRNA (h) Lentiviral Particles: sc-29619-V.

Molecular Weight of α -synuclein: 19 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, α -synuclein (h): 293T lysate: sc-111729 or SK-N-SH cell lysate: sc-2410.

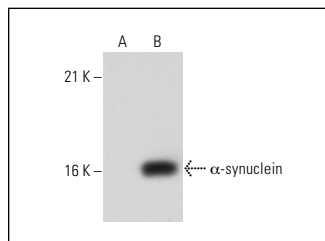
RESEARCH USE

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

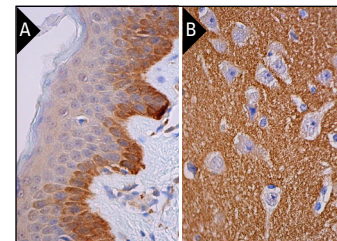
STORAGE

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

DATA



α -synuclein (Syn 204): sc-32280. 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 (Syn 204): sc-32280. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts and melanocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining (B).

SELECT PRODUCT CITATIONS

- Papachroni, K.K., et al. 2007. Autoantibodies to α -synuclein in inherited Parkinson's disease. *J. Neurochem.* 101: 749-756.
- Alladi, P.A., et al. 2010. Ageing enhances α -synuclein, ubiquitin and endoplasmic reticular stress protein expression in the nigral neurons of Asian Indians. *Neurochem. Int.* 57: 530-539.
- Brahmachari, S., et al. 2016. Activation of tyrosine kinase c-Abl contributes to α -synuclein-induced neurodegeneration. *J. Clin. Invest.* 126: 2970-2988.
- Schwab, K., et al. 2017. A protein aggregation inhibitor, leuco-methylthionium bis(hydromethanesulfonate), decreases α -synuclein inclusions in a transgenic mouse model of synucleinopathy. *Front. Mol. Neurosci.* 10: 447.
- Neumann, B., et al. 2020. Multiplex LA-ICP-MS bio-imaging of brain tissue of a parkinsonian mouse model stained with metal-coded affinity-tagged antibodies and coated with indium-spiked commercial inks as internal standards. *J. Neurosci. Methods* 334: 108591.
- D'Amico, R., et al. 2022. Toxic exposure to endocrine disruptors worsens Parkinson's disease progression through NRF2/HO-1 alteration. *Biomedicines* 10: 1073.
- Schwab, K., et al. 2022. Glutamatergic transmission and receptor expression in the synucleinopathy h- α -synL62 mouse model: effects of hydromethylthionine. *Cell. Signal.* 97: 110386.

PROTOCOLS

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