

α -synuclein (211): sc-12767

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 (211) is a mouse monoclonal antibody raised against amino acids 121-125 of α -synuclein of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α -synuclein (211) is available conjugated to agarose (sc-12767 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12767 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12767 PE), fluorescein (sc-12767 FITC), Alexa Fluor[®] 488 (sc-12767 AF488), Alexa Fluor[®] 546 (sc-12767 AF546), Alexa Fluor[®] 594 (sc-12767 AF594) or Alexa Fluor[®] 647 (sc-12767 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-12767 AF680) or Alexa Fluor[®] 790 (sc-12767 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

α -synuclein (211) 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: HEL 92.1.7 cell lysate: sc-2270, TF-1 cell lysate: sc-2412 or SK-N-SH cell lysate: sc-2410.

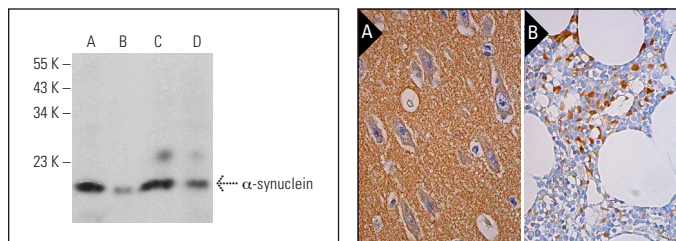
RESEARCH USE

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 (211): sc-12767. Western blot analysis of α -synuclein expression in HEL 92.1.7 (A) and TF-1 (B) whole cell lysates and human brain (C) and human cerebellum (D) tissue extracts.

α -synuclein (211) HRP: sc-12767 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining (A). Direct immunoperoxidase staining of formalin fixed, paraffin-embedded, human bone marrow tissue showing cytoplasmic staining of subset of hematopoietic cells (B).

SELECT PRODUCT CITATIONS

- El-Agnaf, O.M., et al. 2003. α -synuclein implicated in Parkinson's disease is present in extracellular biological fluids, including human plasma. *FASEB J.* 17: 1945-1947.
- Fauvet, B., et al. 2012. α -synuclein in central nervous system and from erythrocytes, mammalian cells, and *Escherichia coli* exists predominantly as disordered monomer. *J. Biol. Chem.* 287: 15345-15364.
- Dansithong, W., et al. 2015. Generation of SNCA cell models using zinc finger nuclease (ZFN) technology for efficient high-throughput drug screening. *PLoS ONE* 10: e0136930.
- Zaltieri, M., et al. 2015. α -synuclein and synapsin III cooperatively regulate synaptic function in dopamine neurons. *J. Cell Sci.* 128: 2231-2243.
- Impellizzeri, D. 2016. Traumatic brain injury leads to development of Parkinson's disease related pathology in mice. *Front. Neurosci.* 10: 458.
- Majbour, N.K., et al. 2016. Oligomeric and phosphorylated α -synuclein as potential CSF biomarkers for Parkinson's disease. *Mol. Neurodegener.* 11: 7.
- Yuan, J., et al. 2016. Acteoside binds to caspase-3 and exerts neuroprotection in the rotenone rat model of Parkinson's disease. *PLoS ONE* 11: e0162696.
- Campolo, M., et al. 2017. The neuroprotective effect of dimethyl fumarate in a MPTP-mouse model of Parkinson's disease: involvement of reactive oxygen species/nuclear factor- κ B/nuclear transcription factor related to NF-E2. *Antioxid. Redox Signal.* 27: 453-471.

PROTOCOLS

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