

nitrate α/β -synuclein (Syn12): sc-32278

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 was found to be up-regulated, while β -synuclein is down-regulated, 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.

REFERENCES

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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. Hashimoto, M., et al. 1997. NACP, a synaptic protein involved in Alzheimer's disease, is differentially regulated during megakaryocyte differentiation. Biochem. Biophys. Res. Commun. 237: 611-616.
5. Polymeropoulos, M.H., et al. 1997. Mutation in the α -synuclein gene identified in families with Parkinson's disease. Science 276: 2045-2047.
6. da Costa, C.A., et al. 2003. β -synuclein displays an antiapoptotic p53-dependent phenotype and protects neurons from 6-hydroxydopamine-induced caspase 3 activation: cross-talk with α -synuclein and implication for Parkinson's disease. J. Biol. Chem. 278: 37330-37335.
7. Wilson, C.A., et al. 2004. Degradative organelles containing mislocalized α and β -synuclein proliferate in Presenilin 1 null neurons. J. Cell Biol. 165: 335-346.
8. Lee, D., et al. 2004. β -synuclein exhibits chaperone activity more efficiently than α -synuclein. FEBS Lett. 576: 256-260.

CHROMOSOMAL LOCATION

Genetic locus: SNCA (human) mapping to 4q22.1, SNCB (human) mapping to 5q35.2.

SOURCE

nitrate α/β -synuclein (Syn12) is a mouse monoclonal antibody raised against recombinant *in vitro*-nitrate 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.

APPLICATIONS

nitrate α/β -synuclein (Syn12) is recommended for detection of nitrate α -synuclein and β -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/β -synuclein siRNA (h): sc-43589, α/β -synuclein shRNA Plasmid (h): sc-43589-SH and α/β -synuclein shRNA (h) Lentiviral Particles: sc-43589-V.

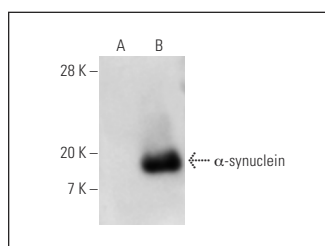
Molecular Weight of nitrate α/β -synuclein: 19 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

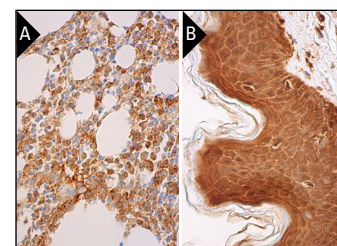
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



nitrate α/β -synuclein (Syn12): sc-32278. Western blot analysis of untreated (A) and nitrate (B) human recombinant α -synuclein.



nitrate α/β -synuclein (Syn12): sc-32278. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of keratinocytes and Langerhans cells and cytoplasmic staining of fibroblasts and melanocytes (B).

STORAGE

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

RESEARCH USE

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