SANTA CRUZ BIOTECHNOLOGY, INC.

α-synuclein (C-20)-R: sc-7011-R

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 was found to be up-regulated, while β-synuclein is down-regulated, 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 (C-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-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-7011 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α-synuclein (C-20)-R is recommended for detection of α-synuclein of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α-synuclein (C-20)-R is also recommended for detection of α-synuclein in additional species, including equine, canine, bovine, porcine and avian.

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 and 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.

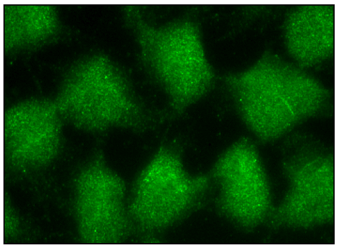
STORAGE

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.

DATA



α-synuclein (C-20)-R: sc-7011-R. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Abeliovich, A., et al. 2000. Mice lacking α-synuclein display functional deficits in the nigrostriatal dopamine system. Neuron 25: 239-252.
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3. Liu, B., et al. 2008. Striatal 19S Rpt6 deficit is related to α-synuclein accumulation in MPTP-treated mice. Biochem. Biophys. Res. Commun. 376: 277-282.
4. Devi, L., et al. 2008. Mitochondrial import and accumulation of α-synuclein impair complex I in human dopaminergic neuronal cultures and Parkinson disease brain. J. Biol. Chem. 283: 9089-9100.
5. Wersinger, C. and Sidhu, A. 2009. Partial regulation of serotonin transporter function by γ-synuclein. Neurosci. Lett. 453: 157-161.
6. Lou, H., et al. 2010. Serine 129 phosphorylation reduces the ability of α-synuclein to regulate tyrosine hydroxylase and protein phosphatase 2A *in vitro* and *in vivo*. J. Biol. Chem. 285: 17648-17661.
7. Voulalas, P.J., et al. 2011. Differential subcellular distribution of rat brain dopamine receptors and subtype-specific redistribution induced by cocaine. Mol. Cell. Neurosci. 46: 645-654.
8. Gao, H.M., et al. 2011. Neuroinflammation and α-synuclein dysfunction potentiate each other, driving chronic progression of neurodegeneration in a mouse model of Parkinson's disease. Environ. Health Perspect. 119: 807-814.