

γ -synuclein (E-20): sc-10698

BACKGROUND

The synucleins, including α -synuclein (also designated NACP for nonamyloid component precursor), β -synuclein (also designated PNP 14 for phosphoneuroprotein 14) and γ -synuclein (also designated persyn or BCSG1 for breast cancer-specific gene 1) are presynaptic proteins abundant in neurons. Synucleins are predominantly expressed in the brain and are speculated to be involved in synaptic regulation and neuronal plasticity. α -synuclein, identified as a component of Alzheimer's disease amyloid plaques, is localized to neuronal cell bodies and synapses. Coordinate expression of α -synuclein and β -synuclein may be important during hematopoietic cell differentiation. A mutant form of α -synuclein is found in patients with early onset Parkinson's disease. γ -synuclein is associated with axonal pathology in Parkinson's disease.

CHROMOSOMAL LOCATION

Genetic locus: SNCG (human) mapping to 10q23.2; Sncg (mouse) mapping to 14 B.

SOURCE

γ -synuclein (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of γ -synuclein of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10698 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

γ -synuclein (E-20) is recommended for detection of γ -synuclein of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

γ -synuclein (E-20) is also recommended for detection of γ -synuclein in additional species, including porcine.

Suitable for use as control antibody for γ -synuclein siRNA (h): sc-42289, γ -synuclein siRNA (m): sc-42290, γ -synuclein shRNA Plasmid (h): sc-42289-SH, γ -synuclein shRNA Plasmid (m): sc-42290-SH, γ -synuclein shRNA (h) Lentiviral Particles: sc-42289-V and γ -synuclein shRNA (m) Lentiviral Particles: sc-42290-V.

Molecular Weight of γ -synuclein monomer: 17 kDa.

Molecular Weight of γ -synuclein dimer: 35 kDa.

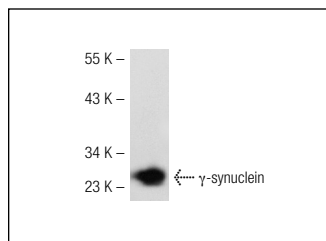
Molecular Weight of γ -synuclein tetramer: 68 kDa.

Positive Controls: HT29 whole cell lysate.

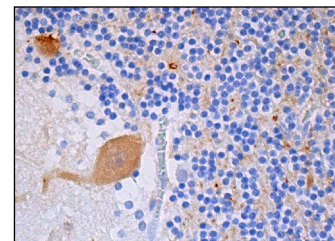
STORAGE

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

DATA



γ -synuclein (E-20): sc-10698. Western blot analysis of human recombinant γ -synuclein (BCSG1).



γ -synuclein (E-20): sc-10698. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in granular layer.

SELECT PRODUCT CITATIONS

- Lu, A., et al. 2002. Blockade of AP1 transactivation abrogates the abnormal expression of breast cancer-specific gene 1 in breast cancer cells. *J. Biol. Chem.* 277: 31364-31372.
- Espinoza, L.A., et al. 2005. Altered expression of γ -synuclein and detoxification-related genes in lungs of rats exposed to JP-8. *Am. J. Respir. Cell Mol. Biol.* 32: 192-200.
- Surgucheva, I., et al. 2005. Interaction of myocilin with γ -synuclein affects its secretion and aggregation. *Cell. Mol. Neurobiol.* 25: 1009-1033.
- Surgucheva, I., et al. 2008. γ -synuclein as a marker of retinal ganglion cells. *Mol. Vis.* 14: 1540-1548.
- Gupta, A., et al. 2008. Regulation of CRABP-II expression by MycN in Wilms tumor. *Exp. Cell Res.* 314: 3663-3668.
- Oort, P.J., et al. 2008. γ -synuclein is an adipocyte-neuron gene coordinately expressed with leptin and increased in human obesity. *J. Nutr.* 138: 841-848.
- Frandsen, P.M., et al. 2009. Porcine γ -synuclein: molecular cloning, expression analysis, chromosomal localization and functional expression. *Mol. Biol. Rep.* 36: 971-979.

RESEARCH USE

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

MONOS
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Try **γ -synuclein (1H10D2): sc-65979** or **γ -synuclein (8H11): sc-135575**, our highly recommended monoclonal alternatives to γ -synuclein (E-20).