alpha-Synuclein. Mouse Monoclonal Antibody Syn 211 , Human.

Non-A beta component of AD amyloid, Non-A4 component of amyloid precursor, NACP

Background

This antibody recognizes the 19 kDa protein, α-synuclein, which belongs to a family of small cytoplasmic proteins expressed predominantly in neurons. The epitope maps to amino acid residues 121–125 of human α-synuclein. α-synuclein may be involved in neuronal plasticity and could act as a molecular chaperone that mediates the transformation of soluble Aβ into insoluble amyloid. The protein is a major component of Lewy bodies, the pathological hallmark of Parkinson's disease, and is also observed in senile plaques of Alzheimer's disease patients. Human α-synuclein appears to be phosphorylated at two major sites, serine 129 and serine 87, and phosphorylation may play a role in the functional regulation of the protein.

Ordering Information

Catalog Number
X1883M

Size
100 µg

Form
Unconjugated

Host/Clone
Mouse Clone Syn 211

Formulation
Provided as solution in phosphate buffered saline pH 7.2 with 0.1% BSA and 0.01% sodium azide

Concentration
0.5 mg/ml

Isotype
IgG1

Applications
ELISA, Western Blot, Immunohistochemistry

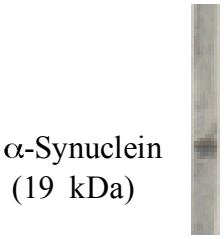
Species Reactivity

Human.

Immunogen

Recombinant human α-synuclein.

Legend:
Extracts of SHSY-5Y human neuroblastoma cells were resolved by SDS PAGE and transferred to a PVDF membrane. Membranes were incubated with
1 µg/mL of the anti-α synuclein antibody (Syn 211). After washing, membranes were incubated with goat F(ab')2 anti-mouse IgG alkaline phosphatase (cat. # AMI4405) diluted 1:5000 and the membrane was incubated with CDP-substrate using the WesternStarTM method (Tropix). The membrane was then exposed to Kodak BioMax film.



POSITIVE CONTROL/TISSUE EXPRESSION

Positive Control: Human SHSY-5Y cells. Expressed principally in brain but is also expressed in low concentrations in all tissues examined except in liver. Concentrated in presynaptic nerve terminals. Located in the cytoplasm, membrane and nucleus.

COMMENTS

For Western blotting, the recommended antibody concentration is 0.5–1.0 µg/mL. The optimal concentration should be determined for each specific application. Does not cross-react with mouse or rat. Other species were not tested.

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20ºC. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

1) Bruening, W., et al. (2000) Synucleins are expressed in the majority of breast and ovariar carcinomas and in preneoplastic lesions of the ovary. Cancer 88(9):2154–2163.

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3) Giasson, B.I. (2000) Oxidative damage linked to neurodegeneration by selective alpha-synuclein nitration in synucleinopathy lesions. Science 290:985–989.

4) McLean, P.J., et al. (2000) Membrane association and protein conformation of α-synuclein in intact neurons. J. Biol. Chem. 275(12):8812–8816.

5) Okochi, M., et al. (2000) Constitutive phosphorylation of the Parkinson's disease associated α-synuclein. J. Biol. Chem. 275(1):390–397.

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