**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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SNCA (human) mapping to 4q22.1.

**SOURCE**

α-synuclein (LB 509) is a mouse monoclonal antibody raised against Lewy bodies of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

α-synuclein (LB 509) 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 µg per 100-500 µg 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: α-synuclein (h): 293T Lysate: sc-111729, SH-SY5Y cell lysate: sc-3812 or IMR-32 cell lysate: sc-2409.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

**DATA**

![Western Blot analysis of α-synuclein expression in non-transfected: sc-117752 (A) and human α-synuclein transfected: sc-111729 (B) 293T whole cell lysates.](image1)

![Immunoeroxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining.](image2)

**SELECT PRODUCT CITATIONS**


**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.

See α-synuclein (211): sc-12767 for α-synuclein antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.