SANTA CRUZ BIOTECHNOLOGY, INC.

α/β-synuclein (Syn 202): sc-32281

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 has been found to be upregulated, while β-synuclein is downregulated, 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, SNCB (human) mapping to 5q35.2; Snca (mouse) mapping to 6 B3, Sncb (mouse) mapping to 13 B1.

SOURCE

α/β-synuclein (Syn 202) is a mouse monoclonal antibody raised against human recombinant α/β-synuclein.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α/β-synuclein (Syn 202) is available conjugated to agarose (sc-32281 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32281 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32281 PE), fluorescein (sc-32281 FITC), Alexa Fluor® 488 (sc-32281 AF488), Alexa Fluor® 546 (sc-32281 AF546), Alexa Fluor® 594 (sc-32281 AF594) or Alexa Fluor® 647 (sc-32281 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32281 AF680) or Alexa Fluor® 790 (sc-32281 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

α/β-synuclein (Syn 202) is recommended for detection of α-synuclien and β-synuclein of mouse, rat and 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/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.

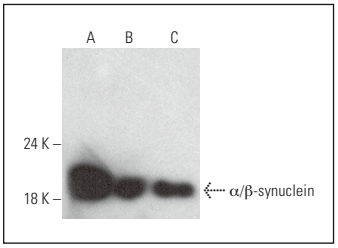
Molecular Weight of α/β-synuclein: 19 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or human brain extract: sc-364375.

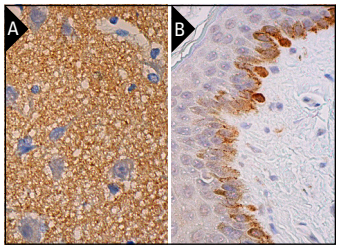
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



α/β-synuclein (Syn 202) HRP: sc-32281 HRP. Direct western blot analysis of α/β-synuclein expression in rat brain (**A**), human brain (**B**) and mouse brain (**C**) tissue extracts.



α/β-synuclein (Syn 202) HRP: sc-32281 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**A**). α/β-synuclein (Syn 202): sc-32281. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of melanocytes (**B**).

SELECT PRODUCT CITATIONS

1. Ko, L.W., et al. 2008. Aggregates assembled from overexpression of wild-type α-synuclein are not toxic to human neuronal cells. J. Neuropathol. Exp. Neurol. 67: 1084-1096.
2. Danielson, S.R., et al. 2009. Preferentially increased nitration of α-synuclein at tyrosine-39 in a cellular oxidative model of Parkinson's disease. Anal. Chem. 81: 7823-7828.
3. Morrison, G.J., et al. 2012. Considerations in the identification of endogenous substrates for protein L-isoaspartyl methyltransferase: the case of synuclein. PLoS ONE 7: e43288.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.