

PRODUCT DATASHEET

Anti-Alpha-Synuclein Antibody, clone 6113-10

Overview

Catalog #	77-520 (100 µL size) or 77-520-020 (20 µL size)
Conjugate	Unconjugated
Isotype	IgG 2a
Clone Number	6113-10
Concentration	1.0 mg/mL
Host Species	Mouse Monoclonal
Format	Purified by Protein A chromatography
Buffer	1X PBS, 0.05% Sodium Azide pH 7.4
Applications	ICC 1:1000 IHC 1:5000 WB 1:200-1:500
Species Reactivity	Human, Mouse, Non-Human Primate, Rat
Immunogen	Full length human alpha-synuclein (accession number P37840) produced recombinantly in E. coli.
Molecular Weight	~18 kDa
Cite this Antibody	Pel-Freez Biologicals Cat# 77-520-100, or Pel-Freez Biologicals Cat# 77-520-020; RRID: AB_2924734

Details

Target Description

Alpha-synuclein (SNCA), also known as PARK1, NACP, PARK4, is a member of the synuclein family, which also includes beta- and gamma-synuclein. Alpha-synuclein is a highly conserved protein known to be abundant in neurons and especially presynaptic terminals where it serves multiple roles including regulation of synaptic vesicle trafficking and subsequent neurotransmitter release. Functionally, alpha-synuclein has been implicated in synaptic plasticity (Liu 2004) and the assembly of snare complexes (Burre 2010) and it is known to be associated with various neuropathologies including Parkinson's Disease, Lewy Body Dementia, and Alzheimer's Disease, where it forms insoluble protein aggregates. Early studies of amyloid deposits in the brains of Alzheimer's patients revealed two previously uncharacterized peptides in addition to the amyloid beta fragment (Ueda 1993), both of which were found to correspond to alpha-synuclein (SNCA). Later studies confirmed that aggregated alpha-synuclein proteins are present in brain lesions (Lewy bodies) that are hallmarks of neurodegenerative synucleinopathies and that alpha-synuclein likely plays a role in the pathogenesis of Parkinson's disease, Lewy body dementia, and Alzheimer's disease among other neuropathologies. The SNCA antibody was raised against full-length human alpha-synuclein and recognizes endogenous levels of alpha-synuclein in brain by Western blot and immunohistochemistry.

Specificity	No cross-reactivity reported.
Purification Method	Produced by in vitro bioreactor culture of hybridoma lines followed by Protein A affinity chromatography. Purified mAbs are >90% specific antibody at 1 mg/mL.
Quality Control Tests	Each new lot of this antibody is tested to confirm that it recognizes a single immunoreactive band of expected molecular weight when used in Western blot on lysate from rat whole brain.
Storage	Aliquot and store at $\leq -20^{\circ}\text{C}$ for long term storage. For short term storage, store at $2-8^{\circ}\text{C}$. For maximum recovery of product, centrifuge the vial prior to removing the cap.

Our Guarantee

As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience our 50+ year passion for science.

Note: For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, viewable on our website.

Figure Notes

Sagittal section of formalin fixed, paraffin-embedded rat brain showing strong staining of alpha-synuclein within the molecular layer of the cerebellum. Image at right shows higher magnification of indicated area of interest. Sections were stained with anti-alpha-synuclein (clone 6113-10) antibody at 1:5000 dilution and detected with anti-mouse HRP.

Western blotting of A) WT

Western blotting of rat or

HEK-293T cell lysate or B) mouse brain homogenate alpha-synuclein knockout

(10 $\mu\text{g}/\text{lane}$) with

HEK-293T cell lysate (10

Pel-Freez Biologicals $\mu\text{g}/\text{lane}$) with Antibodies anti-alpha-synuclein

Incorporated mouse anti- antibodies at 1:200 alpha-synuclein antibody dilution and detected

(clone 6113-10).

with anti-mouse HRP.

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