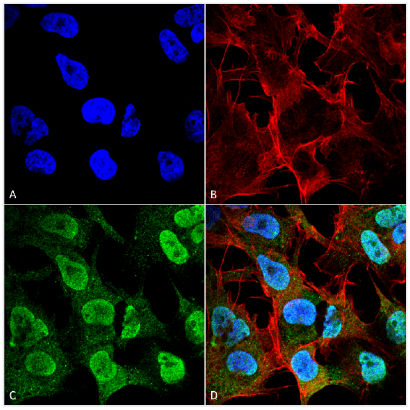
Alpha Synuclein (SNCA) Antibody – Mouse Monoclonal

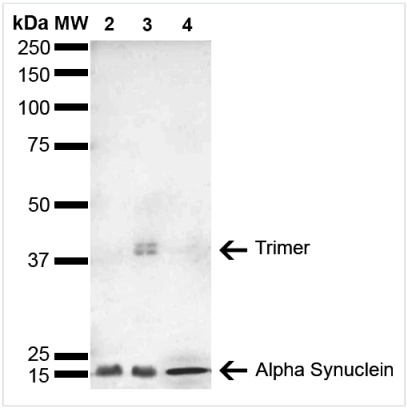
PRODUCT OVERVIEW

Product Name	Alpha Synuclein (Snca), Monoclonal Antibody
Full Product Name	Alpha Synuclein Antibody, Clone 4F1: ATTO 488
Product Gene Name	anti-Snca antibody
Product Synonym Names	Mouse Anti-Mouse Alpha Synuclein Monoclonal IgG1; Alpha Synuclein Antibody: ATTO 488; Alpha Synuclein Antibody; Non-A beta component of AD amyloid Antibody; Non-A4 component of amyloid precursor Antibody; NACP Antibody; SNCA Antibody; PARK1 Antibody; PARK 1 Antibody; alphaSYN Antibody; PARK 4 antibody; PARK4 antibody; Parkinson disease familial 1 antibody; Parkinson disease (autosomal dominant; Lewy body) 4 antibody; SYN antibody
Clonality	Monoclonal
Isotype	IgG1
Clone Number	4F1
Host	Mouse
Species Reactivity	Human; Mouse; Rat
Purity/Purification	Protein G Purified
Concentration	1 mg/ml (lot specific)
Specificity	Binds multiple linear epitopes within human alpha synuclein: 21-70 aa, 61-90 aa, and 101-140 aa, determined using Dot blot and ELISA with corresponding peptides. Detects ~14 kDa band corresponding to Alpha synuclein. Band at ~40 kDa is a trimer.
Preparation and Storage	Store at -20 degree C.
Matching Pairs	Unconjugated Antibody: Alpha Synuclein Clone #4F1 (MBS808970) ATTO 488 Conjugated Antibody: Alpha Synuclein Clone #4F1 (MBS808972)
Matching Pairs	Unconjugated Antibody: N/A (MBS808972) ATTO 488 Conjugated Antibody: Alpha Synuclein Clone #4F1 (MBS808972)
Molecular Weight	12,345 Da
3D Structure	ModBase 3D Structure for O55042
Target	Alpha Synuclein
Immunogen	Mouse alpha synuclein aggregate
Immunogen Species	Mouse
Cellular Localization	Cytoplasm; Cytosol; Membrane; Nucleus; Cell Junction; Synapse
Conjugate	ATTO 488
Storage Buffer	PBS pH 7.4, 50% glycerol, 0.09% Sodium Azide
Tissue Specificity	Expressed principally in brain but is also expressed in low concentrations in all tissues examined except in liver. Concentrated in presynaptic nerve terminals.
Product Categories/Family for anti-Snca antibody	Antibodies; Neuroscience; Neurodegeneration; Alzheimer's Disease; Tangles & Tau; Neuroscience; Neurodegeneration; Parkinson's Disease; Synuclein

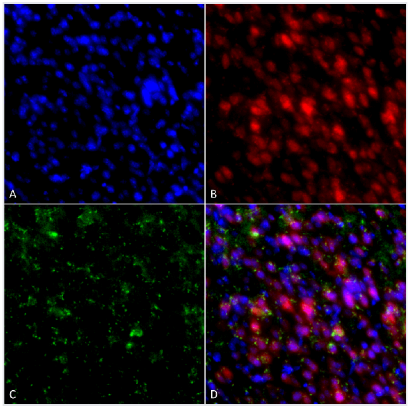
Applications Tested/Suitable for anti-Snca antibody	Western Blot (WB), Dot Blot (DB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF), ELISA (EIA)
Application Notes for anti-Snca antibody	WB: 1:1000 DB: 1:1000 IHC: 1:200 ICC/IF: 1:100 ELISA: 1:1000
Related Product Information for anti-Snca antibody	Alpha-Synuclein (SNCA) is expressed predominantly in the brain, where it is concentrated in presynaptic nerve terminals (1). Alpha-synuclein is highly expressed in the mitochondria of the olfactory bulb, hippocampus, striatum and thalamus (2). Functionally, it has been shown to significantly interact with tubulin (3), and may serve as a potential microtubule-associated protein. It has also been found to be essential for normal development of the cognitive functions; inactivation may lead to impaired spatial learning and working memory (4). SNCA fibrillar aggregates represent the major non A-beta component of Alzheimers disease amyloid plaque, and a major component of Lewy body inclusions, and Parkinson's disease. Parkinson's disease (PD) is a common neurodegenerative disorder characterized by the progressive accumulation in selected neurons of protein inclusions containing alpha-synuclein and ubiquitin (5, 6).
Product References and Citations for anti-Snca antibody	1. "Genetics Home Reference: SNCA". US National Library of Medicine. (2013). 2. Zhang L., et al. (2008) Brain Res. 1244: 40-52. 3. Alim M.A., et al. (2002) J Biol Chem. 277(3): 2112-2117. 4. Kokhan V.S., Afanasyeva M.A., Van'kin G. (2012) Behav. Brain. Res. 231(1): 226-230. 5. Spillantini M.G., et al. (1997) Nature. 388(6645): 839-840. 6. Mezey E., et al. (1998) Nat Med. 4(7): 755-757.
Other Notes	Small volumes of anti-Snca antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Snca purchase	MBS808972 is an antibody targeting Snca. Also known as Alpha Synuclein Antibody, Clone 4F1: ATTO 488. Reactive in Human; Mouse; Rat. Host: Mouse.



Immunocytochemistry/Immunofluorescence (ICC/IF) of anti-Snca antibody
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha Synuclein Monoclonal Antibody, Clone 4F1. Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Alpha Synuclein Monoclonal Antibody at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:200 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60 min at RT, 5 min at RT. Localization: Cytoplasm: medium; Nucleus: strong. Magnification: 60X. (A) DAPI (blue) nuclear stain. (B) Phalloidin Texas Red F-Actin stain. (C) Alpha Synuclein Antibody. (D) Composite.



Western Blot (WB) of anti-Snca antibody
Western Blot analysis of Human, Mouse, Rat Brain showing detection of 14 kDa Alpha Synuclein protein using Mouse Anti-Alpha Synuclein Monoclonal Antibody, Clone 4F1. Lane 1: Molecular Weight Ladder (MW). Lane 2: Mouse Brain cell lysate. Lane 3: Rat brain cell lysate. Lane 4: Human brain cell lysate. Load: 15 ug. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Mouse Anti-Alpha Synuclein Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Mouse HRP:IgG at 1:3000 for 1 hour at RT. Color Development: ECL solution (Super Signal West Pico) for 5 min in RT. Predicted/Observed Size: 14 kDa. Other Band(s): ~40 kDa (trimer).



Immunocytochemistry/Immunofluorescence (ICC/IF) of anti-Snca antibody
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha Synuclein Monoclonal Antibody, Clone 4F1. Tissue: Primary hippocampal neurons treated with active Alpha Synuclein Protein Aggregate (SPR-322) at 4 ug/ml to induce fibrils. Species: Rat. Fixation: 4% paraformaldehyde. Primary Antibody: Mouse Anti-Alpha Synuclein Monoclonal Antibody at 1:200 for 24 hours at 4 degree C. Secondary Antibody: Goat Anti-Mouse Alexa Fluor 488 at 1:700 for 1 hour at RT. Counterstain: Guinea Pig Anti-NeuN (red) neuronal marker (Donkey Anti-Guinea Pig Alexa Fluor 647 1:700); DAPI (blue) nuclear stain at 1:6000, 1:3000 for 60 min at RT, 5 min at RT. Magnification: 20X. (A) DAPI (blue) nuclear stain. (B) NeuN neuronal marker (red). (C) Alpha Synuclein Antibody. (D) Composite.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Snca. It may not necessarily be applicable to this product.

NCBI GI #	109638747
NCBI GeneID	20617
NCBI Accession #	NP_001035916.1
UniProt Primary Accession #	O55042
UniProt Secondary Accession #	Q3U130; Q9CXF8; Q9EQC3; Q9QUR3
UniProt Related Accession #	O55042
GenBank Nucleotide #	NM_001042451.2
NCBI Official Full Name	alpha-synuclein
NCBI Official Synonym Full Names	synuclein, alpha
NCBI Official Symbol	Snca
NCBI Official Synonym Symbols	NACP; alphaSYN; alpha-Syn
UniProt Protein Name	Alpha-synuclein
UniProt Synonym Protein Names	Non-A beta component of AD amyloid; Non-A4 component of amyloid precursor; NACP
Protein Family	Alpha-synuclein
UniProt Gene Name	Snca
UniProt Synonym Gene Names	Syn; NACP
NCBI Protein Information	alpha-synuclein
UniProt Comments for Snca	May be involved in the regulation of dopamine release and transport.
Research Articles on Snca	**1.** alpha-synuclein levels can be reduced in neurons without impairing (or improving) mitochondrial bioenergetics or distribution

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