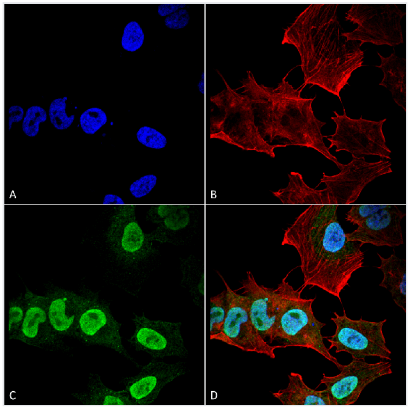
# Alpha Synuclein (SNCA) Antibody – Mouse Monoclonal

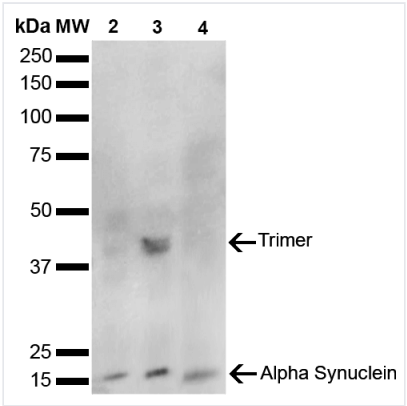
## PRODUCT OVERVIEW

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|---|---|
| **Product Name** | Alpha Synuclein (Snca), Monoclonal Antibody |
| **Full Product Name** | Alpha Synuclein Antibody, Clone 10H7: Biotin |
| **Product Gene Name** | anti-Snca antibody |
| **Product Synonym Names** | Mouse Anti-Mouse Alpha Synuclein Monoclonal IgG1; Alpha Synuclein Antibody: Biotin; 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** | 10H7 |
| **Host** | Mouse |
| **Species Reactivity** | Human; Mouse; Rat |
| **Purity/Purification** | Protein G Purified |
| **Concentration** | 1 mg/ml (lot specific) |
| **Specificity** | Binds within the 101-130 aa region of human alpha synuclein, 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 #10H7 (MBS808934)<br>Biotin Conjugated Antibody: Alpha Synuclein Clone #10H7 (MBS808945) |
| **Matching Pairs** | Unconjugated Antibody: N/A (MBS808945)<br>Biotin Conjugated Antibody: Alpha Synuclein Clone #10H7 (MBS808945) |
| **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** | Biotin |
| **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), Immunocytochemistry (ICC), Immunofluorescence (IF), ELISA (EIA) |

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| **Application Notes for anti-Snca antibody** | WB: 1:1000<br>DB: 1:1000<br>ICC/IF: 1:100<br>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).<br>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** | MBS808945 is an antibody targeting Snca. Also known as Alpha Synuclein Antibody, Clone 10H7: Biotin. 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 10H7. 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: weak; Nucleus: Med. 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 10H7. 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).

## ADDITIONAL DETAILS

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

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|---|---|
| **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 |

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| **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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