



# **Synuclein, alpha (SNCA, Alpha Synuclein, MGC110988, Non-A beta Component of AD Amyloid, Non-A4 Component of Amyloid Precursor, NACP, PARK1, PARK4, Parkinson Disease Familial 1, PD1)**

## **Catalog number**

S9500-03F

## **Supplier**

United States Biological

Alpha synuclein is an abundant 140 amino acid neuronal protein, expressed primarily at presynaptic terminals in the central nervous system. May be involved in the regulation of dopamine release and transport. Soluble protein, normally localized primarily at the presynaptic region of axons, which can form filamentous aggregates that are the major non amyloid component of intracellular inclusions in several neurodegenerative diseases (synucleinopathies). Induces fibrillization of microtubule-associated protein tau. Reduces neuronal responsiveness to various apoptotic stimuli, leading to a decreased caspase 3 activation.

## **Applications**

Suitable for use in Western Blot and Immunohistochemistry. Other applications not tested.

## **Recommended Dilution**

Optimal dilutions to be determined by the researcher.

## **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. SUBUNIT: Soluble monomer which can form filamentous aggregates. Interacts with UCHL1. Interacts with phospholipase D and histones.

## **Cellular Localization**

Cytoplasm. Membrane. Nucleus. Note=Membrane-bound in dopaminergic neurons. Also found in the nucleus.

## **Alternative Products**

3 named isoforms produced by alternative splicing. Additional isoforms seem to exist.

## **Storage and Stability**

May be stored at 4°C for short-term only. For long-term storage and to avoid repeated freezing and thawing, add sterile glycerol (40-50%), aliquot and store at -20°C. Aliquots are stable for at least 12 months at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

## **Immunogen**

A synthetic peptide (SEEGYQDYPEA) corresponding to the C-terminal of human alpha synuclein protein (aa 129-140) conjugated to Blue Carrier Protein has been used as the immunogen. The peptide is homologous with the corresponding sequence derived from alpha synuclein protein in



monkey and pig.

**Formulation**

As reported

**Purity**

Whole antisera

**Specificity**

Immunohistochemical and western blot analysis of human brain indicates a high level of specificity for this antiserum. Species Crossreactivity: This antibody is known to react with human, mouse and rat alpha synuclein. Other species have not yet been tested.

**Product Type**

Pab

**Source**

human

**Isotype**

IgG

**Grade**

Serum

**Applications**

IHC WB

**Crossreactivity**

Hu Mo Rt

**Storage**

-20°C

**Reference**

1. Lundvig, et al Brain Res Mol Brain Res 134, 3-17 (Mar 24, 2005). 2. Bennett, Pharmacol Ther 105, 311-31 (Mar, 2005). 3. Vekrellis, et al., Mol Neurobiol 30, 1-21 (Aug, 2004). 4. Martin, et al., Protein Pept Lett 11, 229-37 (Jun, 2004). 5. Doherty, et al., Acta Neuropathol (Berl) 107, 169-75 (Feb, 2004). 6. Goedert, Curr Opin Genet Dev 11, 343-51 (Jun, 2001). 7. Saito, et al., J Neurol Sci 177, 48-59 (Aug 1, 2000). 8. Lucking, et al., Cell Mol Life Sci 57, 1894-908 (Dec, 2000). 9. Kahle, et al., Ann N Y Acad Sci 920, 33-41 (2000).