Sheep antibody to alpha synuclein (116-131): affinity purified

**Catalogue No.:** S-075-50

**Description:** Alpha synuclein is an abundant 140 amino acid neuronal protein, expressed primarily at presynaptic terminals in the central nervous system. Alpha synuclein has been associated with several neurodegenerative diseases. A point mutation in the gene coding for the alpha-synuclein protein was the first discovery linking this protein to a rare familial form of Parkinson's disease (PD). Subsequently, other mutations in the alpha-synuclein gene have been identified in familial PD. The aggregated proteinaceous inclusions called Lewy bodies found in PD and cortical Lewy body dementia (LBD) were discovered to be predominantly alpha-synuclein. Aberrant aggregation of alpha-synuclein has been detected in an increasing number of neurodegenerative diseases, collectively known as synucleopathies. Alpha-synuclein exists physiologically in both soluble and membrane-bound states, in unstructured and alpha-helical conformations, respectively. The physiological function of alpha-synuclein appears to require its translocation between these subcellular compartments and interconversion between the 2 conformations. Abnormal processing of alpha-synuclein is predicted to lead to pathological changes in its binding properties and function.

**Batch No.:** See product label

**Unit size:** 50 µg

**Antigen:** A synthetic peptide (CMPVDPDNEAYEMPSEE) of human alpha synuclein protein (aa: 116-131) conjugated to diphtheria toxoid has been used as the immunogen.

**Other Names:** Non-A beta component of AD amyloid; Non-A4 component of amyloid precursor; NACP

**Accession:** SYUA_HUMAN

**Produced in:** Sheep

**Purity:** Affinity purified and dialysed against phosphate buffered saline (PBS).

**Applications:**
- Immunohistochemistry (IHC): 1-4 µg/mL (paraffin sections)
- Western Blotting (WB): 0.5 - 2.0 µg/mL. Fixing of proteins on membrane with 0.4% formaldehyde (30 min at room temperature) recommended, see Lee & Kamitani, 2011.
- Flow Cytometry: 2 µg antibody per ~10^6 cells, methanol-fixed.
- Immunocytochemistry (ICC): 1-4 µg/mL, 4% formaldehyde-fixed cells. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.

**Specificity:** This antiserum specifically detects alpha synuclein.

**Cross-reactivity:** This antibody is known to react with alpha synuclein of human, mouse, rat and other rodents.

**Form:** Lyophilised

**Reconstitution:** Reconstitute in 50 µL of sterile water. Centrifuge to remove any insoluble material.

**Storage:** Store lyophilized antibody at 2-8°C. After reconstitution keep aliquots at -20°C for a higher stability, and at 2-8°C with an appropriate antibacterial agent. Glycerol (1:1) may be added for an additional stability. Avoid repetitive freeze/thaw cycles.

**Expiry Date:** 12 months after purchase

**Specific References:** 1. Kuo Y.M. et al. (2010) Extensive enteric nervous system abnormalities in mice transgenic for artificial chromosomes containing Parkinson disease-associated alpha-synuclein gene...
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mutations precede central nervous system changes. Hum Mol Genet. May 1;19(9):1633-50
2. Pelkonen A. et al. (2010) Stimulated dopamine overflow and alpha-synuclein expression in
the nucleus accumbens core distinguish rats bred for differential ethanol preference. J

References:

Immunohistochemical staining (paraffin-embedded tissue) of glial
inclusions in white matter from a case of multiple system atrophy using
sheep polyclonal to human alpha synuclein, catalogue number S-075-50.