



Synuclein, beta (SNCB, beta Synuclein, Phosphoneuroprotein 14, PNP14)

Catalog number

S9501-02F

Supplier

United States Biological

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 (1).

Applications

Suitable for use in Immunohistochemistry. Other applications not tested.

Recommended Dilution

Optimal dilutions to be determined by the researcher.

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 (IEPLMEPEGSYEDPPQE) as part of human beta synuclein protein (aa: 108-125) conjugated to diptheria toxoid.

Formulation

Reconstitute in 100 ul of sterile water. Centrifuge to remove any insoluble material.

Purity

Serum

Specificity

Known to be specific for alpha synuclein Species Crossreactivity: This antiserum is know to react with human and rat and other rodents beta synuclein.



Product Type

Pab

Source

human

Isotype

IgG

Grade

Serum

Applications

IHC

Crossreactivity

Hu 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). ; 10. Clayton, et al., Trends Neurosci 21, 249-54 (Jun, 1998).