Synuclein-α Mouse mAb

CatalogNo: YM0606

Key Features

Host Species
- Mouse

Reactivity
- Human

Applications
- WB,IHC,IF,ELISA

MW
- 14kD (Calculated)

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:200-1:1000
ELISA 1:10000
IF 1:50-200

Basic Information

Clonality	Monoclonal
Clone Number	16B2

Immunogen Information

Immunogen	Purified recombinant fragment of Synuclein-α expressed in E. Coli.
Specificity	Synuclein-α Monoclonal Antibody detects endogenous levels of Synuclein-α protein.

Target Information

Gene name SNCA

Protein Name Alpha-synuclein

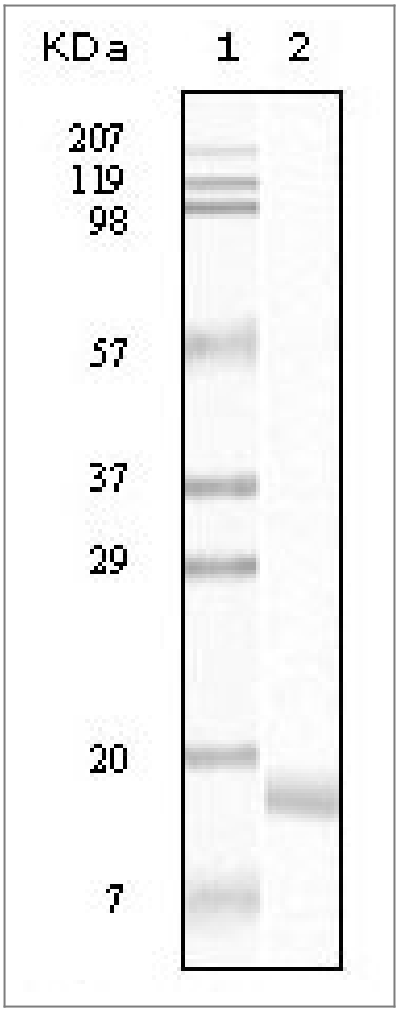
Organism	Gene ID	UniProt ID
Human	6622;	P37840;

Cellular Localization Cytoplasm . Membrane . Nucleus . Cell junction , synapse . Secreted . Cell projection , axon . Membrane-bound in dopaminergic neurons (PubMed:15282274) . Expressed and colocalized with SEPTIN4 in dopaminergic axon terminals , especially at the varicosities (By similarity) . .

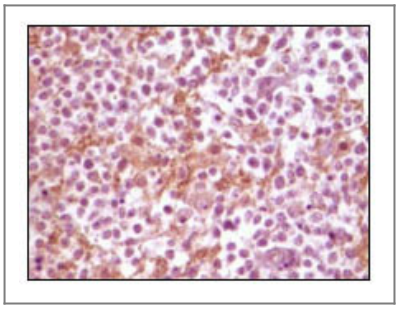
Tissue specificity Highly expressed in presynaptic terminals in the central nervous system. Expressed principally in brain.

Function	Alternative products:Additional isoforms seem to exist ,Disease:Brain iron accumulation type 1 (NBIA1 , also called Hallervorden-Spatz syndrome) , a rare neuroaxonal dystrophy , is histologically characterized by axonal spheroids , iron deposition , Lewy body (LB) -like intraneuronal inclusions , glial inclusions and neurofibrillary tangles. SNCA is found in LB-like inclusions , glial inclusions and spheroids. ,Disease:Defects in SNCA are a cause of autosomal dominant Parkinson disease 1 (PARK1) [MIM:168601 , 168600]. Parkinson disease (PD) is a complex , multifactorial disorder that typically manifests after the age of 50 years , although early-onset cases (before 50 years) are known. PD generally arises as a sporadic condition but is occasionally inherited as a simple mendelian trait. Although sporadic and familial PD are very similar , inherited forms of the disease usually begin at earlier ages and are associated with atypical clinical features. PD is characterized by bradykinesia , resting tremor , muscular rigidity and postural instability , as well as by a clinically significant response to treatment with levodopa. The pathology involves the loss of dopaminergic neurons in the substantia nigra and the presence of Lewy bodies (intraneuronal accumulations of aggregated proteins) , in surviving neurons in various areas of the brain. ,Disease:Defects in SNCA are the cause of Lewy body dementia (DLB) [MIM:127750]. DLB is a neurodegenerative disorder clinically characterized by dementia and parkinsonism , often with fluctuating cognitive function , visual hallucinations , falls , syncopal episodes , and sensitivity to neuroleptic medication. Presence of Lewy bodies are the only essential pathologic features. ,Disease:Defects in SNCA are the cause of Parkinson disease 4 (PARK4) [MIM:605543 , 168600]. ,Disease:Deposition of fibrillar amyloid proteins intraneuronally as neurofibrillary tangles is characteristic of Alzheimer disease (AD) . SNCA is a minor protein found within these deposits , but a major non amyloid component. ,Domain:The NAC domain is involved in the fibril formation. The middle region forms the core of the filaments. The C-terminus may regulate aggregation and determine the diameter of the filaments. ,Function: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. ,PTM:Hallmark lesions of neurodegenerative synucleinopathies contain alpha-synuclein that is modified by nitration of tyrosine residues and possibly by dityrosine cross-linking to generated stable oligomers. ,PTM:Phosphorylated , predominantly on serine residues. Phosphorylation by CK1 appears to occur on residues distinct from the residue phosphorylated by other kinases. Phosphorylation of Ser-129 is selective and extensive in synucleinopathy lesions. In vitro , phosphorylation at Ser-129 promoted insoluble fibril formation. Phosphorylated on Tyr-125 by a PTK2B-dependent pathway upon osmotic stress. ,PTM:Ubiquitinated. The predominant conjugate is the diubiquitinated form. ,similarity:Belongs to the synuclein family. ,subcellular location:Membrane-bound in dopaminergic neurons. Also found in the nucleus. ,subunit:Soluble monomer which can form filamentous aggregates. Interacts with UCHL1 (By similarity) . Interacts with phospholipase D and histones. ,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. ,

Validation Data



Western Blot analysis using Synuclein-α Monoclonal Antibody against truncated Synuclein-α recombinant protein.



Immunohistochemistry analysis of paraffin-embedded human glioma tissue, showing membrane localization with DAB staining using Synuclein-α Monoclonal Antibody.

Contact information

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Please scan the QR code to access additional product information: **Synuclein-α Mouse mAb**