Phospho-Alpha Synuclein (pTyr125) Antibody [clone 32S65] (FY12311)

Catalog No.	Formulation	Size
FY12311	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32S65
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P37840
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-Alpha Synuclein (pTyr125) antibody is available for research use only.

Description

Phospho-Alpha Synuclein (pTyr125) antibody is designed to recognize alpha synuclein phosphorylated at tyrosine 125. Alpha synuclein is a presynaptic neuronal protein involved in synaptic vesicle regulation, neurotransmitter release, and synaptic plasticity. Under normal conditions, it contributes to synaptic function and neuronal health. However, alpha synuclein aggregation is the defining feature of synucleinopathies, including Parkinson's disease, dementia with Lewy bodies, and multiple system atrophy. Post-translational modifications such as phosphorylation strongly influence aggregation behavior, with phosphorylation at Tyr125 being one of the critical regulatory sites.

Phospho-Alpha Synuclein (pTyr125) antibody is highly relevant in neuroscience and neurodegeneration research. It allows specific detection of alpha synuclein phosphorylated at Tyr125, enabling researchers to distinguish pathological states from normal physiological conditions. This phospho-specific antibody is used to investigate how signaling pathways and kinases regulate alpha synuclein modifications and contribute to disease mechanisms.

The antibody is suitable for western blotting, immunohistochemistry, and immunofluorescence. In western blot assays, Phospho-Alpha Synuclein (pTyr125) antibody distinguishes phosphorylated isoforms from total alpha synuclein, providing a clear measure of kinase activity and disease-related changes. Immunohistochemistry identifies Lewy body inclusions and other aggregates in brain tissue sections, revealing disease-specific distribution. Immunofluorescence allows visualization of phospho-synuclein in cultured neurons, enabling high-resolution analysis of aggregation and synaptic localization.

Phosphorylation of alpha synuclein at Tyr125 has been linked to cellular stress responses and may influence the interaction of the protein with membranes and other synaptic proteins. Evidence suggests that phosphorylation alters aggregation kinetics and toxicity, making it a critical focus for therapeutic research. By using Phospho-Alpha Synuclein (pTyr125) antibody, researchers can explore how modifications regulate protein misfolding and neurodegeneration.

Phospho-Alpha Synuclein (pTyr125) antibody is also a valuable tool in drug discovery. Modulating phosphorylation states is being explored as a therapeutic approach in Parkinson's disease and related disorders. Accurate detection of phosphorylation at Tyr125 enables assessment of drug effects on signaling pathways, synaptic biology, and aggregation dynamics. Translational studies rely on such reagents to connect molecular mechanisms with potential clinical outcomes.

NSJ Bioreagents offers Phospho-Alpha Synuclein (pTyr125) antibody as a reliable reagent for studies of protein aggregation, phosphorylation, and neurodegeneration. With proven specificity across multiple assay formats, it supports ongoing research into the mechanisms and therapeutic targeting of synucleinopathies.

Application Notes

Optimal dilution of the Phospho-Alpha Synuclein (pTyr125) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-alpha Synuclein (Y125) was used as the immunogen for the Phospho-Alpha Synuclein (pTyr125) antibody.

Storage

Store the Phospho-Alpha Synuclein (pTyr125) antibody at -20oC.

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