

Anti-Human Alpha-Synuclein Antibody [JB42-33] - BSA and Azide free (Capture)

HA723467



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	JB42-33

Description: Alpha-synuclein (aSyn) is a protein that, in humans, is encoded by the SNCA gene. Alpha-synuclein is a neuronal protein that regulates synaptic vesicle trafficking and subsequent neurotransmitter release. It is abundant in the brain, while smaller amounts are found in the heart, muscle and other tissues. In the brain, alpha-synuclein is found mainly in the axon terminals of presynaptic neurons. Within these terminals, alpha-synuclein interacts with phospholipids and proteins. Presynaptic terminals release chemical messengers, called neurotransmitters, from compartments known as synaptic vesicles. The release of neurotransmitters relays signals between neurons and is critical for normal brain function. In Parkinson's disease and other synucleinopathies, insoluble forms of alpha-synuclein accumulate as inclusions in Lewy bodies. Familial Parkinson's disease is associated with mutations in the -synuclein (SNCA) gene. In the process of seeded nucleation, alpha-synuclein acquires a cross-sheet structure similar to other amyloids.

Immunogen: Recombinant protein within Human Alpha-Synuclein aa 1-140.

Positive control: Recombinant Human Alpha-Synuclein protein.

Subcellular location: Cytoplasm, Membrane, Nucleus, Synapse, Secreted, Cell projection, axon.

Database links: SwissProt: P37840 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-56] to Human Alpha-Synuclein antibody (Detector) (HA723468) and Recombinant Human Alpha-Synuclein protein as the standard. The reference range value is 313-20,000 pg/mL.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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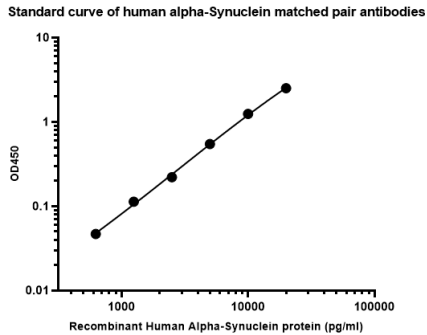
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

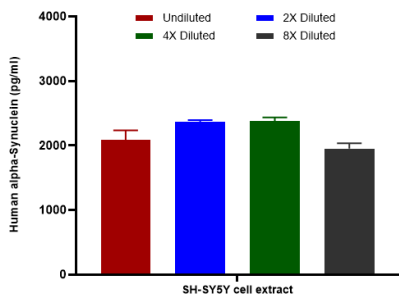
Fig1: Sandwich ELISA analysis of Human Alpha-Synuclein matched pair antibodies

Capture: HA723467, Human Alpha-Synuclein Rabbit mAb [JB42-33]
Detector: HA723468, Human Alpha-Synuclein Rabbit mAb [PSH12-56]



Elisa assay was performed by coating wells of a 96-well plate with 50 μ l per well of capture antibody (HA723467) diluted in carbonate/bicarbonate buffer, at a concentration of 5 μ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1%BSA blocking buffer, and incubated with serial diluted Human Alpha-synuclein protein starting from 20,000 pg/ml to 0 pg/ml and detect antibody (HA723468, Biotin, 0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Fig2: Interpolated concentrations of native alpha-Synuclein in SH-SY5Y extract samples based on a 1,000 μ g/ml extract load.



Capture: HA723467, Human Alpha-Synuclein Rabbit mAb [JB42-33]
Detector: HA723468, Human Alpha-Synuclein Rabbit mAb [PSH12-56]

The concentrations of alpha-Synuclein were measured in duplicates, interpolated from the alpha-Synuclein standard curve and corrected for sample dilution. Undiluted samples are SH-SY5Y extract 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean alpha-Synuclein concentration was determined to be 2,195 pg/ml in SH-SY5Y extract.

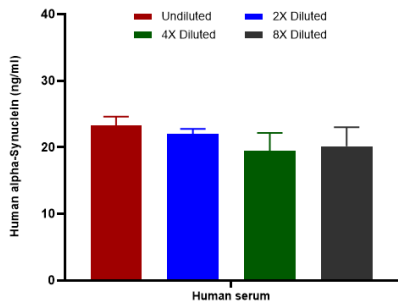


Fig3: Interpolated concentrations of native alpha-Synuclein in human serum samples.

Capture: HA723467, Human Alpha-Synuclein Rabbit mAb [JB42-33]
Detector: HA723468, Human Alpha-Synuclein Rabbit mAb [PSH12-56]

The concentrations of alpha-Synuclein were measured in duplicates, interpolated from the alpha-Synuclein standard curve and corrected for sample dilution. Undiluted samples are human serum 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean alpha-Synuclein concentration was determined to be 21.2 ng/ml in human serum.

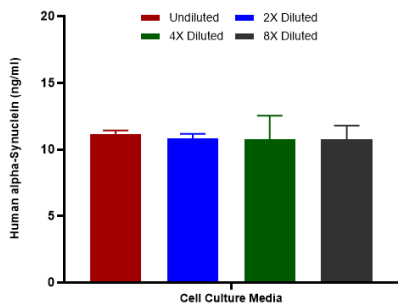


Fig4: Interpolated concentrations of spiked alpha-Synuclein in human cell culture media samples.

Capture: HA723467, Human Alpha-Synuclein Rabbit mAb [JB42-33]
Detector: HA723468, Human Alpha-Synuclein Rabbit mAb [PSH12-56]

The concentrations of alpha-Synuclein were measured in duplicates, interpolated from the alpha-Synuclein standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Prieto Huarcaya S et al. Recombinant pro-CTSD (cathepsin D) enhances SNCA/alpha-Synuclein degradation in alpha-Synucleinopathy models. Autophagy. 2022 May

2. Li R et al. Piperine promotes autophagy flux by P2RX4 activation in SNCA/alpha-synuclein-induced Parkinson disease model. Autophagy. 2022 Mar