Anti-Alpha-Synuclein Antibody [PSH08-83]

HA723035

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IHC-Fr, IF-Tissue
Molecular Wt:	Predicted band size: 14 kDa
Clone number:	PSH08-83

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: Mouse cerebellum tissue, rat cerebellum tissue.

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

Database links: SwissProt: P37840 Human | O55042 Mouse | P37377 Rat

Recommended Dilutions:

WB	1:2,000-1:5,000
IHC-P	1:5,000
IHC-Fr	1:500
IF-Tissue	1:500-1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

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

Purity: Protein A affinity purified.

Images

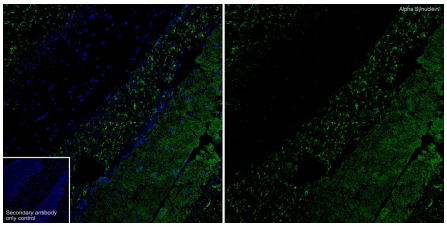

Fig1: Immunofluorescence analysis of frozen mouse cerebellum tissue with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA723035, green) at 1/500 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

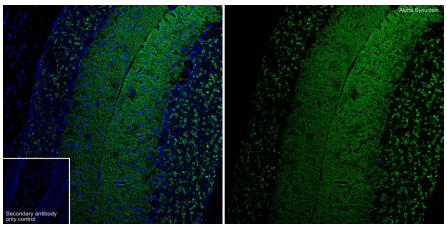

Fig2: Immunofluorescence analysis of frozen rat cerebellum tissue with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA723035, green) at 1/500 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

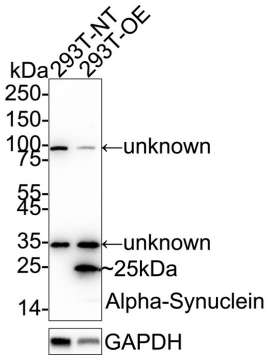

Fig3: Western blot analysis of Alpha-Synuclein on different lysates with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/2,000 dilution.

Lane 1: 293T transfected with empty control cell lysate
Lane 2: 293T transfected with Alpha-Synuclein cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 14 kDa
Observed band size: 25 kDa

Exposure time: 3 minutes; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723035) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

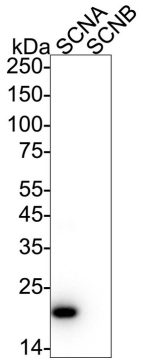

Fig4: Western blot analysis of Alpha-Synuclein on different lysates with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/5,000 dilution.

Lane 1: Human SCNA recombinant protein, 30ng/Lane
Lane 2: Human SCNB recombinant protein, 30ng/Lane

Exposure time: 4 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723035) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

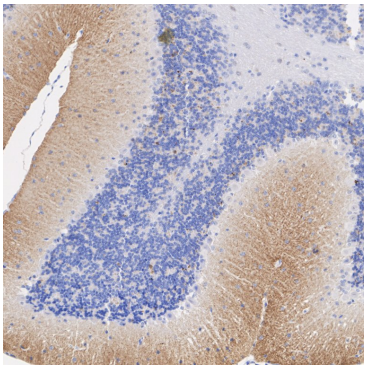

Fig5: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA723035) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

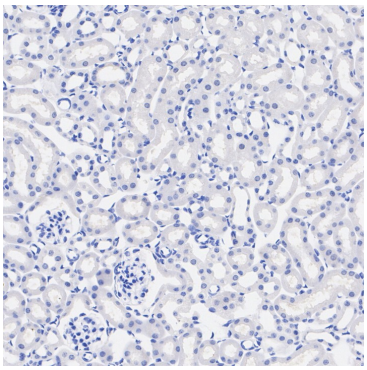

Fig6: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue (low expression) with Rabbit anti-Alpha-Synuclein antibody (HA723035) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA723035) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Estaun-Panzano J et al. Monitoring alpha-synuclein aggregation. Neurobiol Dis. 2023 Jan
2. Praschberger R et al. Neuronal identity defines alpha-synuclein and tau toxicity. Neuron. 2023 May