

Anti-LRRK2 Antibody [PSH07-96] - BSA and Azide free

HA751198



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-P, IF-Tissue, IHC-Fr
Molecular Wt:	Predicted band size: 286 kDa
Clone number:	PSH07-96

Description: The LRRK2 gene encodes a protein with an armadillo repeats (ARM) region, an ankyrin repeat (ANK) region, a leucine-rich repeat (LRR) domain, a kinase domain, a RAS domain, a GTPase domain, and a WD40 domain. The protein is present largely in the cytoplasm but also associates with the mitochondrial outer membrane. LRRK2 interacts with the C-terminal R2 RING finger domain of parkin, and parkin interacted with the COR domain of LRRK2. Expression of mutant LRRK2 induced apoptotic cell death in neuroblastoma cells and in mouse cortical neurons. Expression of LRRK2 mutants implicated in autosomal dominant Parkinson's disease causes shortening and simplification of the dendritic tree in vivo and in cultured neurons. This is mediated in part by alterations in macroautophagy, and can be prevented by protein kinase A regulation of the autophagy protein LC3. The G2019S and R1441C mutations elicit post-synaptic calcium imbalance, leading to excess mitochondrial clearance from dendrites by mitophagy. LRRK2 is also a substrate for chaperone-mediated autophagy.

Immunogen: Recombinant protein within human LRRK2 aa 1,301-1,600.

Positive control: Human brain tissue, mouse brain tissue, rat brain tissue.

Subcellular location: Cytoplasmic vesicle, Perikaryon, Golgi apparatus membrane, Cell projection, axon, dendrite, Endoplasmic reticulum membrane, secretory vesicle, synaptic vesicle membrane, Endosome, Lysosome, Mitochondrion outer membrane, Cytoplasm, cytoskeleton.

Database links: SwissProt: Q5S007 Human | Q5S006 Mouse
Entrez Gene: 300160 Rat

Recommended Dilutions:

IHC-P	1:1,000-1:10,000
IF-Tissue	1:200-1:1,000
IHC-Fr	1:200-1:500

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

Images

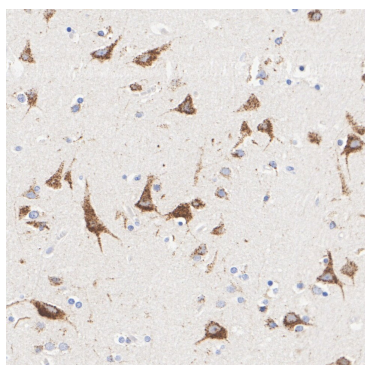


Fig1: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-LRRK2 antibody (HA751198) at 1/1,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751198) at 1/1,000 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.

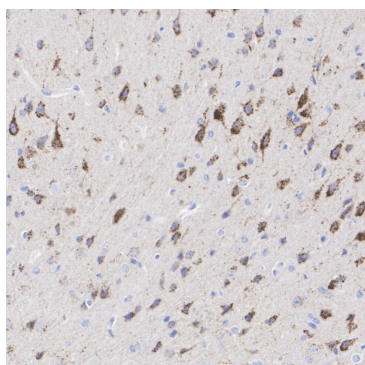


Fig2: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-LRRK2 antibody (HA751198) at 1/10,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751198) at 1/10,000 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.

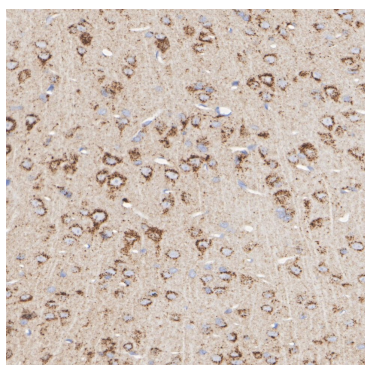
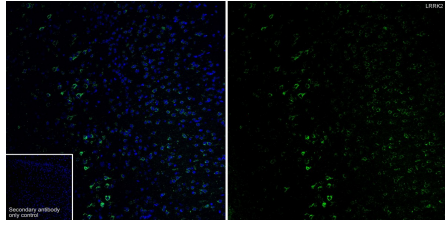


Fig3: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-LRRK2 antibody (HA751198) at 1/1,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751198) at 1/1,000 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.

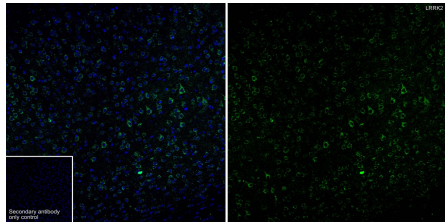
**Fig4:** Application: IF-tissue

Species: Mouse

Site: Cerebral cortex

Sample: Paraffin-embedded section

Antibody concentration: 1/200

**Fig5:** Application: IHC-Fr

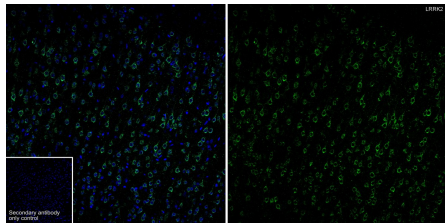
Species: Mouse

Site: Cerebral cortex

Sample: Frozen section

Antibody concentration: 1/200

Antigen retrieval: Not required

**Fig6:** Application: IHC-Fr

Species: Rat

Site: Cerebral cortex

Sample: Frozen section

Antibody concentration: 1/200

Antigen retrieval: Not required

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

Background References

1. Usmani A et al. The Cell Biology of LRRK2 in Parkinson's Disease. Mol Cell Biol. 2021 Apr
2. Rocha EM et al. LRRK2 and idiopathic Parkinson's disease. Trends Neurosci. 2022 Mar

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