Anti-PARK7/DJ1 Antibody [SN07-21] - BSA and Azide free

HA752009

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP, FC
Molecular Wt:	Predicted band size: 20 kDa
Clone number:	SN07-21

Description: PARK7/DJ1 is a ubiquitously expressed protein involved in various cellular processes including cell proliferation, RNA-binding, and oxidative stress. The protein has been found to colocalize within a subset of pathologic tau inclusions in a diverse group of neurodegenerative disorders known as tauopathies. Defects in PARK7/DJ1 are the cause of autosomal recessive early-onset Parkinson's disease 7 (PARK7). Parkinson's disease (PD) is a complex, multifactorial disorder that typically manifests after the age of 50 years. The disease is characterized by bradykinesia, resting tremor, muscular rigidity and postural instability. 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. PARK7 is characterized by onset before 40 years and slow progression. It has also been suggested that PARK7/DJ1 is a mitogen dependent oncogene product involved in Ras related signal transduction pathways.

Immunogen: Synthetic peptide within Human PARK7 aa 11-60 / 189.

Positive control: HeLa cell lysate, SH-SY5Y cell lysate, HepG2 cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, A549 cell lysate, HeLa, NIH/3T3, C6, human brain tissue, mouse cerebrum tissue, mouse hippocampus tissue, rat brain tissue.

Subcellular location: Cell membrane, Cytoplasm, Endoplasmic reticulum, Membrane, Mitochondrion, Nucleus.

Database links: SwissProt: Q99497 Human | Q99LX0 Mouse | O88767 Rat

Recommended Dilutions:

WB	1:2,000-1:5,000
IF-Cell	1:200
IF-Tissue	1:500
IHC-P	1:5,000
FC	1:50-1:100
IP	Use at an assay dependent concentration.

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.

Images

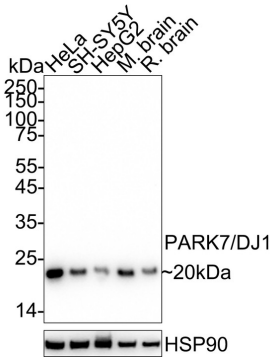

Fig1: Western blot analysis of PARK7/DJ1 on different lysates with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/2,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: SH-SY5Y cell lysate
Lane 3: HepG2 cell lysate
Lane 4: Mouse brain tissue lysate
Lane 5: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 20 kDa
Observed band size: 20 kDa

Exposure time: 20 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 (HA752009) 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.

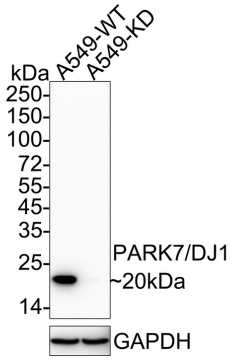

Fig2: Western blot analysis of PARK7/DJ1 on different lysates with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/2,000 dilution.

Lane 1: A549-si NT cell lysate
Lane 2: A549-si PARK7/DJ1 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 20 kDa
Observed band size: 20 kDa

Exposure time: 30 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 (HA752009) 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.

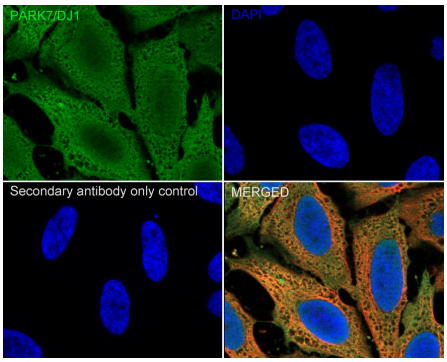

Fig3: Immunocytochemistry analysis of HeLa cells labeling PARK7/DJ1 with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

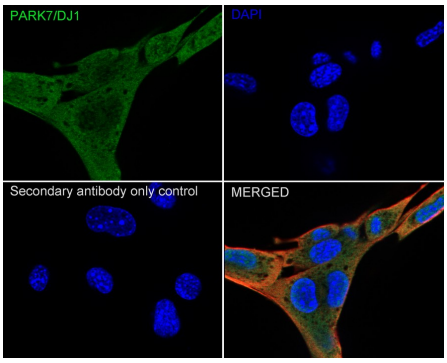

Fig4: Immunocytochemistry analysis of NIH/3T3 cells labeling PARK7/DJ1 with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

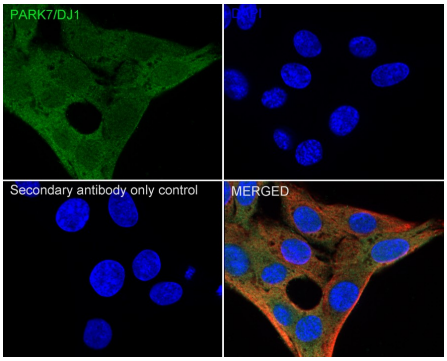

Fig5: Immunocytochemistry analysis of C6 cells labeling PARK7/DJ1 with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/200 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

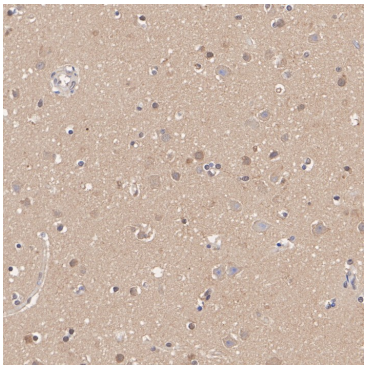

Fig6: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/5,000 dilution.

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 (HA752009) 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.

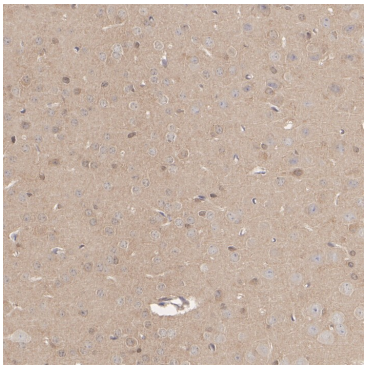

Fig7: Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/5,000 dilution.

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 (HA752009) 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.

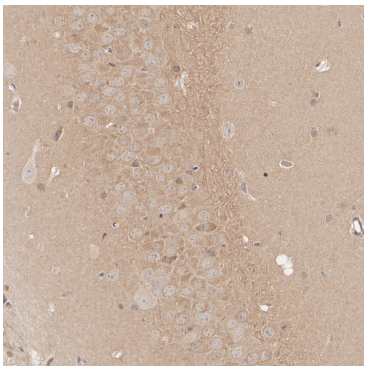

Fig8: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/5,000 dilution.

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 (HA752009) 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.

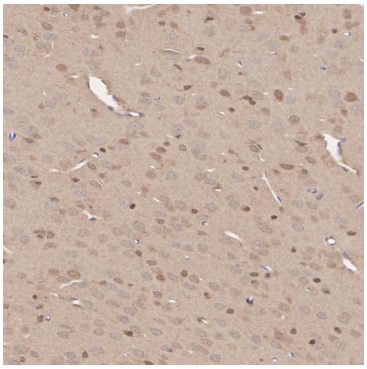

Fig9: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-PARK7/DJ1 antibody (HA752009) at 1/5,000 dilution.

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 (HA752009) 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. Marín-Buera L et al. Differential proteomic profiling unveils new molecular mechanisms associated with mitochondrial complex III deficiency. J Proteomics 113:38-56 (2015).
2. Bifsha P et al. Rgs6 is required for adult maintenance of dopaminergic neurons in the ventral substantia nigra. PLoS Genet 10:e1004863 (2014).