Anti-Human PARK7 Antibody [PSH15-67] - BSA and Azide free (Capture)

HA620001

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH15-67

Description: The gene PARK7, also known as DJ-1, encodes a protein of the peptidase C56 family. The human gene PARK7 has 8 exons and locates at chromosome band 1p36.23. DJ-1 was shown to prevent metabolite and protein damage caused by a glycolytic metabolite. This metabolite has been suggested and confirmed to be cyclic 3-phosphoglycerate (or cyclic 3-phosphoglyceric anhydride). Catalytic efficiency of DJ-1 as a hydrolase of cyclic 3-phosphoglyceric anhydride is 10,000 times higher than other reported enzymatic activities of DJ-1. Under an oxidative condition, DJ-1 inhibits the aggregation of α-synuclein via its chaperone activity, thus functioning as a redox-sensitive chaperone and as a sensor for oxidative stress. Accordingly, DJ-1 apparently protects neurons against oxidative stress and cell death. In parallel, protein DJ-1 acts as a positive regulator of androgen receptor-dependent transcription. DJ-1 is expressed in both the neural retina and retinal pigment epithelium of mammals, where it exerts a neuroprotective role against oxidative stress under both physiological and pathological conditions.

Immunogen: Recombinant protein within Human PARK7 aa 1-189 (HA211158).

Positive control: Recombinant Human PARK7 protein (HA211158).

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

Database links: SwissProt: Q99497 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Mouse monoclonal [PSH15-68] to Human PARK7 antibody (Detector) (HA620002) and Recombinant Human PARK7 protein (HA211158) as the standard. The reference range value is 39.1-20,000 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.

Images

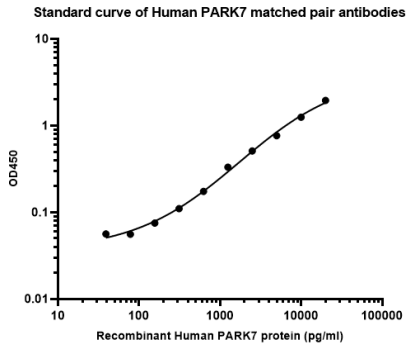

Fig1: Sandwich ELISA analysis of Human PARK7 matched pair antibodies

Capture: HA620001 Human PARK7 Mouse mAb [PSH15-67]
Detector: HA620002, Human PARK7 Mouse mAb [PSH15-68]

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA620001) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human PARK7 protein (HA211158) starting from 20,000 pg/ml to 0 pg/ml and detect antibody (HA620002, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 50 µl per well of SA-HRP for 0.5 hour at 30℃ 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.

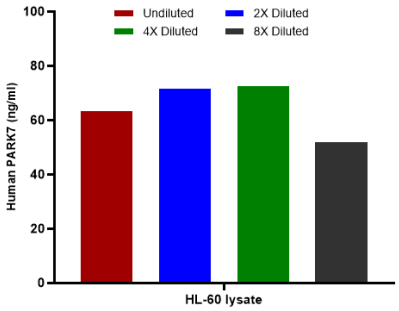

Fig2: Interpolated concentrations of native PARK7 in 0.125 mg/ml HL-60 lysate samples.

Capture: HA620001 Human PARK7 Mouse mAb [PSH15-67]
Detector: HA620002, Human PARK7 Mouse mAb [PSH15-68]

The concentrations of PARK7 were measured in duplicates, interpolated from the PARK7 standard curve and corrected for sample dilution. Undiluted samples are 0.125 mg/ml HL-60 lysate . The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PARK7 concentration was determined to be 64.8 ng/ml in HL-60 lysate.

Background References

1. Pan J et al. The Imbalance of p53-Park7 Signaling Axis Induces Iron Homeostasis Dysfunction in Doxorubicin-Challenged Cardiomyocytes. Adv Sci (Weinh). 2023 May
2. Qu X et al. PARK7 deficiency inhibits fatty acid beta-oxidation via PTEN to delay liver regeneration after hepatectomy. Clin Transl Med. 2022 Sep