**APL059Hu01 100μg**
**Active Parkinson Disease Protein 7 (PARK7)**
**Organism Species: *Homo sapiens* (Human)**
***Instruction manual***

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

## [ PROPERTIES ]

**Source:** Prokaryotic expression.
**Host:** *E. coli*
**Residues:** Met1~Asp189
**Tags:** N-terminal His-tag
**Purity:** >90%
**Endotoxin Level:** <1.0EU per 1μg (determined by the LAL method).
**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .
**Original Concentration:** 200μg/mL
**Applications:** Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
**Predicted isoelectric point:** 6.5
**Predicted Molecular Mass:** 21.1kDa
**Accurate Molecular Mass:** 22kDa as determined by SDS-PAGE reducing conditions.

## [ USAGE ]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## [ STORAGE AND STABILITY ]

**Storage:** Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## [ SEQUENCE ]

MASKRALVIL AKGAEEMETV IPVDVMRRAG IKVTVAGLAG KDPVQCSRDV VICPDASLED AKKEGPYDVV VLPGGNLGAQ NLSESAAVKE ILKEQENRKG LIAAICAGPT ALLAHEIGFG SKVTTHPLAK DKMMNGGHYT YSENRVEKDG LILTSRGPGT SFEFALAIVE ALNGKEVAAQ VKAPLVLKD

## [ ACTIVITY ]

Parkinson Disease Protein 7 (PARK7), a small multifunctional protein (20 kDa) containing 189 amino acids, which participates in transcriptional regulation and mitochondrial regulation, and acts as a molecular chaperone, oxidative stress sensor, and glyoxalase. It has also been described as a protein and nucleotide deglycase. Mutations in Park7 are associated with a small percentage of hereditary early onset Parkinson ’ s disease. Leucine Rich Repeat Kinase 2 (LRRK2) has been identified as an interactor of PARK7, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human PARK7 and recombinant human LRRK2. Briefly, PARK7 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to LRRK2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-PARK7 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human PARK7 and recombinant human LRRK2 was shown in Figure 1, the EC50 for this effect is 0.16 ug/mL.

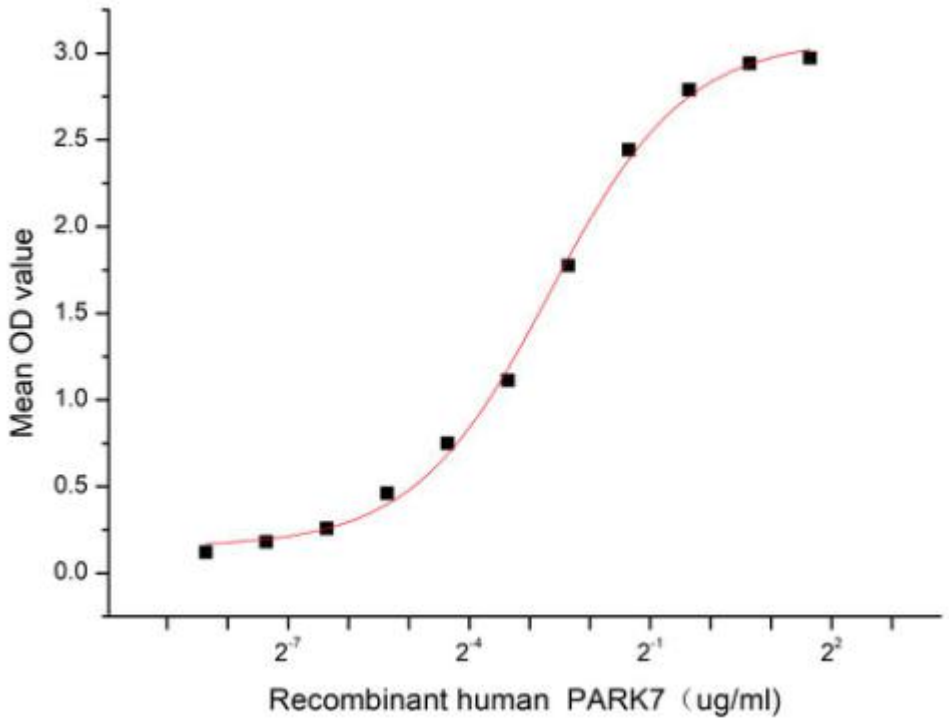


**Figure 1. The binding activity of recombinant human PARK7 and recombinant human LRRK2**

## [ IDENTIFICATION ]

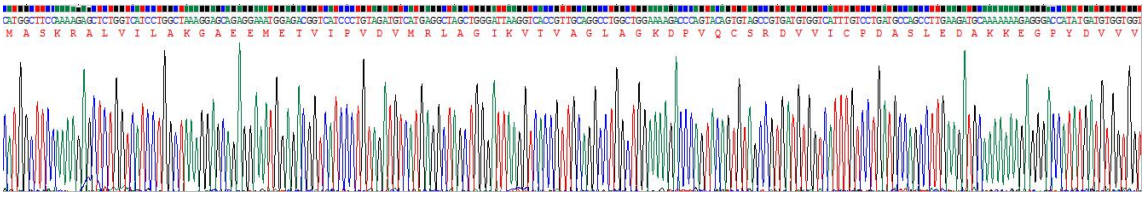

**Figure 2. Gene Sequencing (extract)**

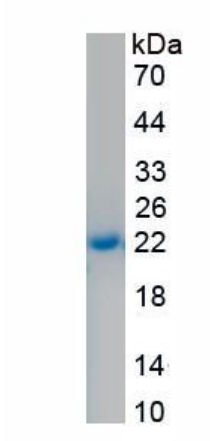


**Figure 3. SDS-PAGE**

**Sample: Active recombinant PARK7, Human**

## [ IMPORTANT NOTE ]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.