APP807Hu02 100μg
Active Poly ADP Ribose Glycohydrolase (PARG)
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~Thr976
Tags: N-terminal His-tag
Purity: >80%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.4
Predicted Molecular Mass: 114.8kDa
Accurate Molecular Mass: 115kDa 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]

MNAGPGCEPC TKRPRWGAAT TSPAASDARS FPSRQRRVLD PKDAHVQFRV
PPSSPACVPG RAGQHRGSAT SLVFKQKTIT SWMDTKGIKT AESESLDSKE
NNNTRIESMM SSVQKDNFYQ HNVEKLENVS QLSLDKSPTE KSTQYLNQHQ
TAAMCKWQNE GKHTEQLLES EPQTVTLVPE QFSNANIDRS PQNDDHSDTD
SEENRDNQQF LTTVKLANAK QTTEDEQARE AKSHQKCSKS CDPGEDCASC
QQDEIDVVPE SPLSDVGSED VGTGPKNDNK LTRQESCLGN SPPFEKESEP
ESPMDVDNSK NSCQDSEADE ETSPGFDEQE DGSSSQTANK PSRFQARDAD
IEFRKRYSTK GGEVRLHFQF EGGESRTGMN DLNAKLPGNI SSLNVECRNS
KQHGKKDSKI TDHFMRLPKA EDRRKEQWET KHQRTERKIP KYVPPHLSPD
KKWLGTPIEE MRRMPRCGIR LPLLRPSANH TVTIRVDLLR AGEVPKPFPT
HYKDLWDNKH VKMPCSEQNL YPVEDENGER TAGSRWELIQ TALLNKFTRP
QNLKDAILKY NVAYSKKWDF TALIDFWDKV LEEAEAQHLY QSILPDMVKI
ALCLPNICTQ PIPLLKQKMN HSITMSQEQI ASLLANAFFC TFPRRNAKMK
SEYSSYPDIN FNRLFEGRSS RKPEKLKTLF CYFRRVTEKK PTGLVTFTRQ
SLEDFPEWER CEKPLTRLHV TYEGTIEENG QGMLQVDFAN RFVGGGVTSA
GLVQEEIRFL INPELIISRL FTEVLDHNEC LIITGTEQYS EYTGYAETYR
WSRSHEDGSE RDDWQRRCTE IVAIDALHFR RYLDQFVPEK MRRELNKAYC
GFLRPGVSSE NLSAVATGNW GCGAFGGDAR LKALIQILAA AAAERDVVYF
TFGDSELMRD IYSMHIFLTE RKLTVGDVYK LLLRYYNEEC RNCSTPGPDI
KLYPFIYHAV ESCAETADHS GQRTGT

[ACTIVITY]

Poly ADP Ribose Glycohydrolase (PARG) is a critical enzyme responsible for the catabolism of poly(ADP-ribose) (PAR), a post-translational modification synthesized primarily by PARP enzymes in response to DNA damage. By hydrolyzing PAR chains, PARG plays an essential role in regulating DNA repair, chromatin remodeling, and cell fate decisions, such as apoptosis and necrosis. Its activity ensures the transient nature of PAR signaling, and dysregulation of PARG

is implicated in cancer, neurodegeneration, and inflammation. PARG interacts with Sirtuin 1 (SIRT1), influencing its deacetylase activity and participating in the coordination of stress response and metabolic pathways.

To detect the activity of recombinant PARG , a functional ELISA assay was performed to evaluate the interaction between recombinant human PARG and recombinant rat SIRT1.

Briefly, PARG was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to SIRT1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-PARG 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 450/630nm immediately. The binding activity of recombinant human PARG and recombinant rat SIRT1 was shown in Figure 1, the EC50 for this effect is 0.019μg/mL.

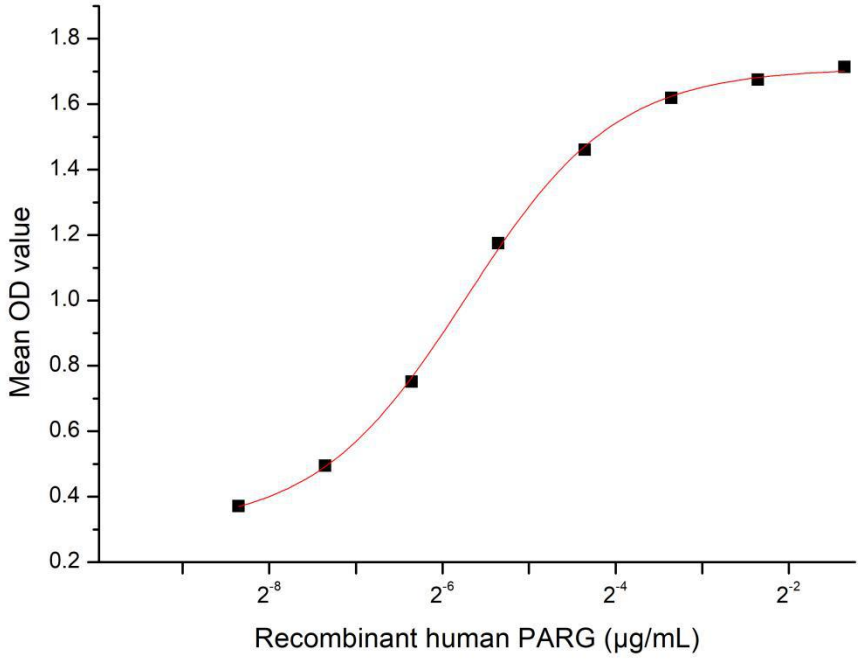

Figure 1. The binding activity of recombinant human PARG and recombinant rat SIRT1

[IDENTIFICATION]

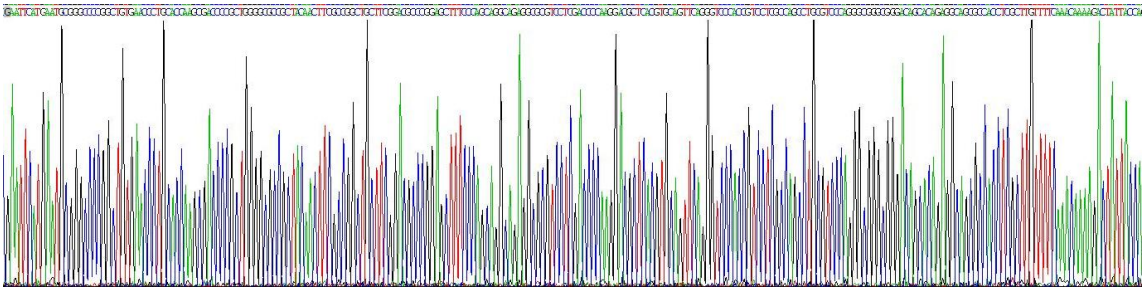

Figure 2. Gene Sequencing (extract)

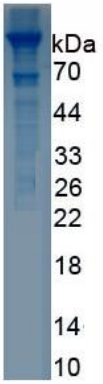

Figure 3. SDS-PAGE

Sample: Active recombinant PARG, 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.