APC704Hu01 100μg
Active Oxoguanine Glycosylase 1 (OGG1)
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: Ser31~Gly345
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: 7.7
Predicted Molecular Mass: 39.2kDa
Accurate Molecular Mass: 39kDa 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]

SELRLDLVLP SGQSFRWREQ
SPAHWSGVLA DQVWTLTQTE EQLHCTVYRG DKSQASRPTP DELEAVRKYF
QLDVTLAQLY HHWGSVDSHF QEVAQKFQGV RLLRQDPIEC LFSFICSSNN
NIARITGMVE RLCQAFGPRL IQLDDVTYHG FPSLQALAGP EVEAHLRKLG
LGYRARYVSA SARAILEEQG GLAWLQQLRE SSYEEAHKAL CILPGVGTKV
ADCICLMALD KPQAVPVDVH MWHIAQRDYS WHPTTSQAKG PSPQTNKELG
NFFRSLWGPY AGWAQAVLFS ADLRQSRHAQ EPPAKRRKGS KGPEG

[ACTIVITY]

Oxoguanine Glycosylase 1 (OGG1), a prominent member of the BER enzyme family, is an essential DNA repair enzyme. OGG1 is highly conserved across eukaryotic organisms and is expressed in various cell types. Its activity is regulated by several factors, including cellular redox status, DNA damage, and cell cycle progression. In addition to its role in repairing oxidative DNA damage, OGG1 has also been implicated in other cellular processes, such as transcription, replication, and apoptosis. In addition, the combination of OGG1 and NEIL1 can contribute to improve the repair efficiency of oxidative DNA damage, maintain genomic stability, and reduce the risk of cell mutation. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human OGG1 and recombinant human NEIL1. Briefly, biotin-linked OGG1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to NEIL1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 nm immediately. The binding activity of recombinant human OGG1 and recombinant human NEIL1 was shown in Figure 1, the EC50 for this effect is 0.33 ug/mL.

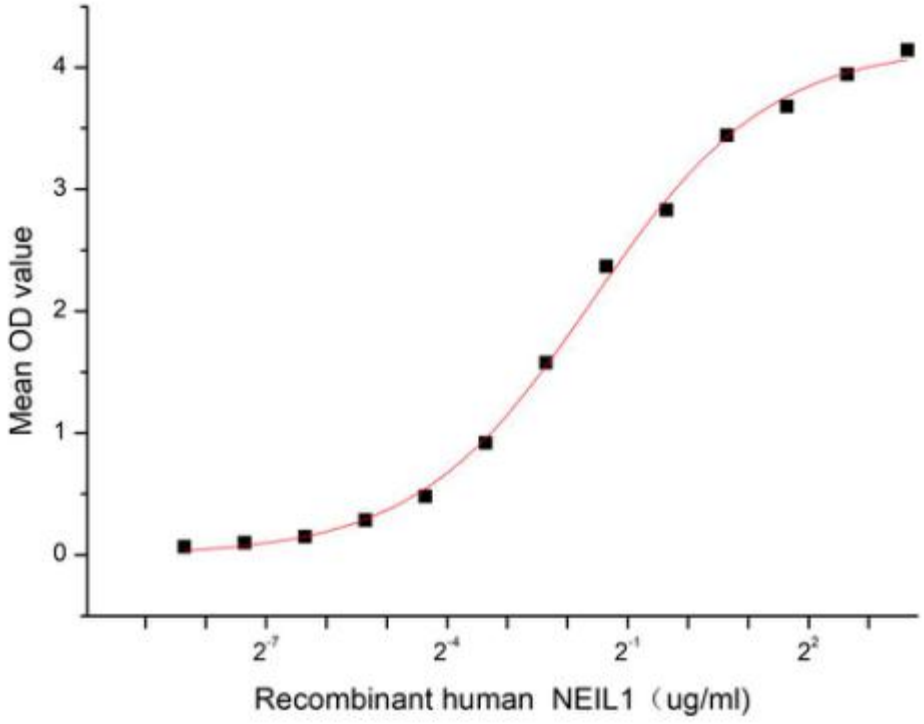

Figure 1. The binding activity of recombinant human OGG1 and recombinant human NEIL1

[IDENTIFICATION]

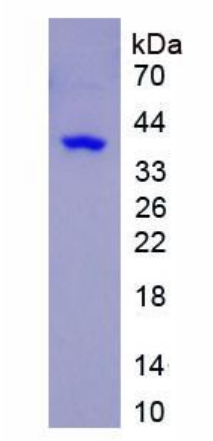

Figure 2. SDS-PAGE

Sample: Active recombinant OGG1, 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.