APE732Hu01 100μg
Active Xeroderma Pigmentosum, Complementation Group B (XPB)
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: Arg542~Ala702
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: 9.5
Predicted Molecular Mass: 22.3kDa
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]

RACQFLIKF
HERRNDKIIV FADNVFALKE YAIRLNKPYI YGPTSQGERM QILQNFKHNP
KINTIFISKV GDTSFDLPEA NVLIQISSHG GSRRQEAQRL GRVLRAKKGM
VAEEYNAFFY SLVSQDTQEM AYSTKRQRFL VDQGYSFKVI TKLAGMEEED
LA

[ACTIVITY]

Xeroderma Pigmentosum, Complementation Group B (XPB) is a crucial DNA helicase encoded by the ERCC3 gene in humans. As a component of the transcription factor IIH (TFIIH) complex, XPB plays dual roles in nucleotide excision repair (NER) and transcription initiation. In NER, it unwinds DNA around lesion sites to facilitate damage removal, while in transcription, it helps open promoter regions for RNA polymerase II. Besides,Poly U Binding Splicing Factor 60kDa (PUF60) has been identified as an interactor of XPB, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human XPB and recombinant human PUF60 .Briefly, biotin-linked XPB were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to PUF60-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 50μl stop solution to the wells and read at 450nm immediately. The binding activity of recombinant human XPB and recombinant human PUF60 was shown in Figure 1, the EC50 for this effect is 0.29μg/mL.

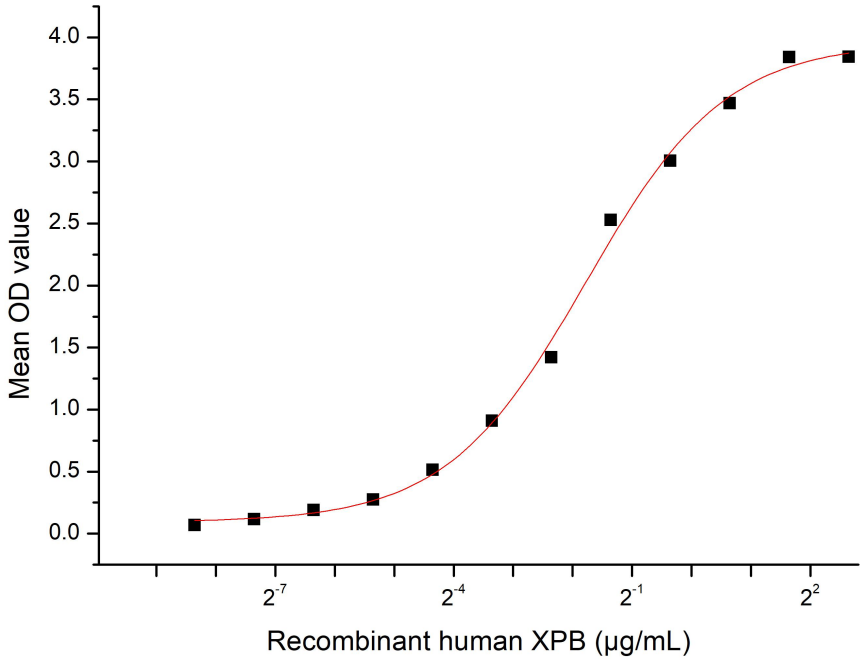

Figure 1. The binding activity of recombinant human XPB and recombinant human PUF60

[IDENTIFICATION]

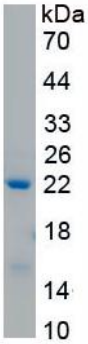

Figure 2. SDS-PAGE

Sample: Active recombinant XPB, 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.