

APJ138Hu01 100µg

Active Eosinophil Peroxidase (EPX)

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: Val251~Thr715

Tags: Two N-terminal Tags, His-tag and SUMO-tag

Purity: >90%

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: 11.3

Predicted Molecular Mass: 67.1kDa

Accurate Molecular Mass: 67kDa 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 2-8°C for one month.

Aliquot and store at -80°C 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 37°C 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]

VDCERTCAQLPPCFPIKIPPNDPRIKNQRDCIPFFRSAPSCPQNKNRVRNQI
NALTsfvdasmvygsevsLSLRLNRNTNYLGLLAINQRFQDNGRALLPFDNL
HDDPCLLTNRSARIPCFLAGDTRSTETPKLAAMHTLFMREHNRLATELRRLN
PRWNGDKLYNEARKIMGAMVQIITYRDFLPLVLGKARARRTLGHYRGYCSNV
DPRVANVFTLAFRFGHTMLQPFMFRLDSQYRASAPNSHVPLSSAFFASWRI
VYEGGIDPILRGLMATPAKLNQRDAMLVDELDRDLFRQVRRIGLDAALNMQ
RSRDHGLPGYNARRFCGLSQPRNLAQLSRVLKNQDLARKFLNLYGTPDNI
DIWIGAI AEPLLPGARVGPLLACLFENQFRRARDGDRFWWWQKRGVFTKRQR
KALSRLSLRIICDNTGITTVSRDIFRANIYPRGFVNCSRIPLNLSAWRGT

[ACTIVITY]

Eosinophil Peroxidase (EPX) is a key enzyme exclusively expressed in eosinophils, a type of white blood cell. It plays a central role in the immune system ' s defense against parasitic infections and participates in regulating inflammatory responses. EPX catalyzes the production of hypohalous acids, which exhibit strong antimicrobial activity to eliminate pathogens. Abnormal EPX expression or function is linked to allergic diseases like asthma and chronic eosinophilic disorders. EPX and Ribonuclease A3 (RNASE3) interact in eosinophils; this binding modulates their respective antimicrobial and pro-inflammatory activities to coordinate immune responses. To detect the activity of recombinant EPX , a functional ELISA assay was performed to evaluate the interaction between recombinant human EPX and recombinant human RNASE3. Briefly, EPX was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to RNASE3-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST and incubated

for 1h with anti-EPX pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human EPX and human RNASE3 was shown in Figure 1, the EC₅₀ for this effect is 0.042µg/mL.

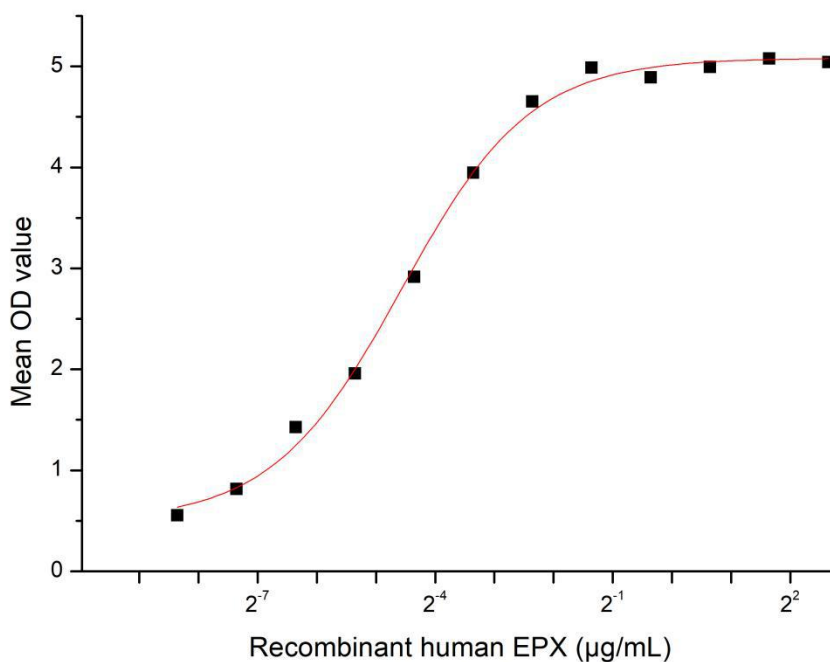


Figure 1. The binding activity of recombinant human EPX and human RNASE3

[IDENTIFICATION]

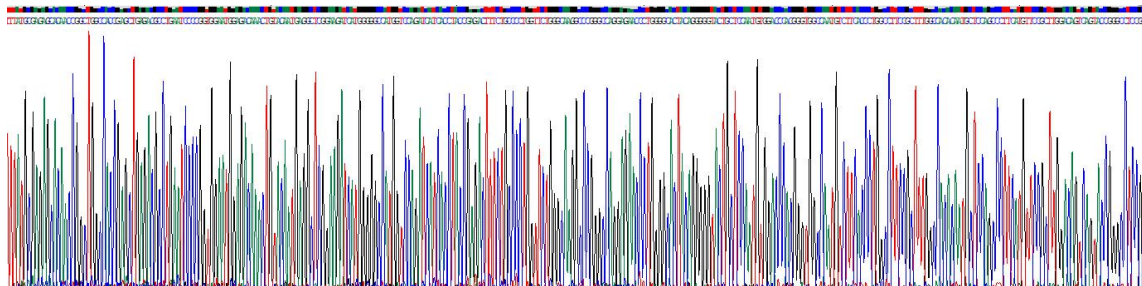


Figure 2. Gene Sequencing (extract)

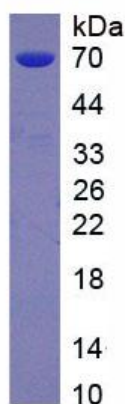


Figure 3. SDS-PAGE

Sample: Active recombinant EPX, 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.