

# Recombinant human PON1 protein

Catalog Number: ATGP3936

## PRODUCT INFORMATION

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### Expression system

HEK293

### Domain

16-355aa

### UniProt No.

P27169

### NCBI Accession No.

NP\_000437.3

### Alternative Names

Aromatic esterase 1, A-esterase 1, K-45, Serum arylalkylphosphatase 1, paraoxonase 1, ESA, MVCD5, PON

## PRODUCT SPECIFICATION

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### Molecular Weight

39.0kDa (346aa)

### Concentration

0.25mg/ml (determined by Absorbance at 280nm)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 20% glycerol

### Purity

> 90% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 2,500 pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1pmole of p-nitrophenyl acetate to p-nitrophenol per minute at pH7.5 at 37C.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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## Description

PON1, also known as A esterase1, is a member of the paraoxonase family. It is an enzyme that hydrolyzes the toxic metabolites of a variety of organophosphorus insecticides. It is also a major anti-atherosclerotic component of high-density lipoprotein (HDL). This protein is activated by PPAR-gamma, which increases synthesis and release of paraoxonase 1 enzyme from the liver, reducing atherosclerosis. PON1 shows a variety of atheroprotective properties by metabolizing inflammatory lipid peroxides. It has evolved to be a highly promiscuous enzyme capable of hydrolysing a wide variety of substrates such as lactones, cyclic carbonates, organophosphorus pesticides and nerve gases. Recombinant human PON1, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

## Amino acid Sequence

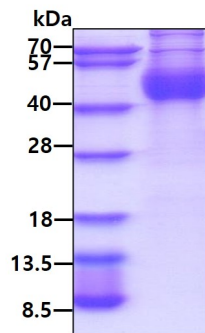
LFRNHQSSYQ TRLNALREVQ PVLPNCNLV KGIETGSEDL EILPNGLAFI SSGLYPGIK SFNPNSPGKI LLMDLNEEDP  
TVLELGITGS KFDVSSFNPH GISTFTDEDN AMYLLVVNHP DAKSTVELFK FQEEKSLH LKTIRHKLLP NLNDIVAVGP  
EHFYGTNDHY FLDPYLQSW E MYLGLAWSYV VYYPSEVRV VAEGDFDANG INISPDGKYV YIAELLAHKI HVYEKHANDWT  
LTPKSLDFN TLVDNISVDP ETGDLWVGCH PNGMKIFFYD SENPPASEVL RIQNILTEEP KVTQVYAENG TVLQGSTVAS  
VYKGLLIGT VFHKALYCEL <HHHHHH>

## General References

Banhela N., et al. (2020) Syst Rev. 9:109.  
Soliman AM., et al. (2020) Eur J Med Chem. 197:112333.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain