

Recombinant human PON1 protein

Catalog Number: ATGP3936

PRODUCT INFORMATION

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

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

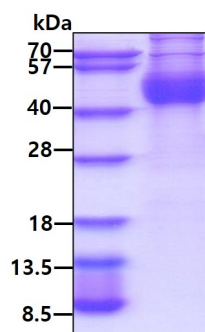
LFRNHQSSYQ TRLNALREVQ PVELPNCNLV KGIETGSEDL EILPNGLAFI SSGLKYPGIK SFNPNSPGKI LLMDLNEEDP
TVLELGITGS KFDVSSFNPH GISTFTDEDN AMYLLVVNHP DAKSTVELFK FQEEKSLH LKTIRHKLLP NLNDIVAVGP
EHFYGTNDHY FLDPYLQSW E MYLGLAWSYV VYYSPSEVRV VAEGFDFANG INISPDGKYV YIAELLAHKI HVEYKHANWT
LTPLKSLDFN TLVDNISVDP ETGDLWVGCH PNGMKIFFYD SENPPASEVL RIQNILTEEP KVTQVYAENG TVLQGSTVAS
VYKGKLLIGT 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