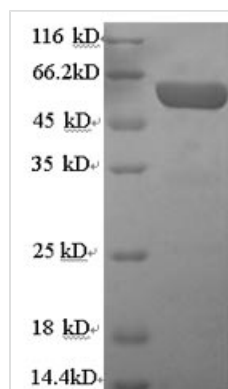




# Recombinant Human Serum paraoxonase/arylesterase 1 (PON1)

<b>Product Code</b>	CSB-EP018369HU
<b>Relevance</b>	Hydrolyzes the toxic metabolites of a variety of organophosphorus insecticides. Capable of hydrolyzing a broad spectrum of organophosphate substrates and lactones, and a number of aromatic carboxylic acid esters. Mediates an enzymatic protection of low density lipoproteins against oxidative modification and the consequent series of events leading to atheroma formation.
<b>Abbreviation</b>	Recombinant Human PON1 protein
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P27169
<b>Alias</b>	Aromatic esterase 1 ;A-esterase 1K-45Serum aryldialkylphosphatase 1
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	AKLIALTLLGMGLALFRNHQSSYQTRLNALREVQPVELPNCNLVKGIETGSEDL EILPNGLAFISSGLKYPGIKSFNPNSPGKILLMDLNEEDPTVLELGITGSKFDVSS FNPHGISTFTDEDNAMYLLVNVNHPDAKSTVELFKFQEEEEKSLLHLKTIRHKLLP NLNDIVAVGPEHFYGTNDHYFLDPYQLQSWEMYGLAWSYVVYYSPSEVRVVA EGFDFANGINISPDGKYVYIAELLAHKIHVYEKXANWTLTPLKSLDFNTLVDNIS VDPETGDLWVGCHPNGMKIFFYDSENPPASEVLRIQNILTEEPKVTQVYAENG TVLQGSTVASVYK GKLLIGTVFHKALYCEL
<b>Research Area</b>	Cardiovascular
<b>Source</b>	E.coli
<b>Target Names</b>	PON1
<b>Expression Region</b>	2-355aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal GST-tagged
<b>Mol. Weight</b>	66.6kDa
<b>Protein Length</b>	Full Length of Mature Protein
<b>Image</b>	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

The expression of recombinant human PON1 protein includes the construction of the expression vector containing the recombinant DNA and the transformation of the expression vector into the E.coli, which provides a variety of macromolecules and components required for transcription and translation. The recombinant DNA was formed by fusing the N-terminal GST tag sequence to the designated sequence encoding the 2-355aa of the human PON1 protein. This N-terminal 6xHis-tagged recombinant human PON1 protein is also characterized by high purity, >90%. Under SDS-PAGE condition, this recombinant PON1 protein migrated to the band of about 55 kDa molecular weight.

Commonly, the expression of PON1 has been mainly found in liver. PON1, as the high-density lipoprotein (HDL)-associated serum enzyme, it exhibits a broad substrate specificity. Low PON1 activity found in children may increase their susceptibility to organophosphates. PON1 is responsible for protecting against exposure to some organophosphorus (OP) pesticides as well as vascular disease. Many findings suggested that PON1 participates in the activities of pesticide sensitivity, cardiovascular disease, and drug metabolism. Meanwhile, PON1 as the antioxidant enzyme, it has been recently confirmed as potential prognostic predictor of acute ischemic stroke. Certain studies indicated that Decreased PON1 activity and PON1 polymorphisms are associated with chronic kidney disease in type 2 diabetes mellitus. More important, researchers recently implied the association of PON1 polymorphisms activity and colorectal cancer predisposition.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.