APA243Hu01 100μg
Active Paraoxonase 1 (PON1)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Gln35~Val206
Tags: N-terminal His-tag
Purity: >98%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.1
Predicted Molecular Mass: 20.6kDa
Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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]

QPVELP NCNLVKGIET
GSEDLEILPN GLAFISSGLK YPGIKSFNPN SPGKILLMDL NEEDPTVLEL
GITGSKFDVS SFNPHGISTF TDEDNAMYLL VVNHPDAKST VELFKFQEEE
KSLLHLKTIR HKLLPNLNDI VAVGPEHFYG TNDHYFLDPY LQSWEMYLGL
AWSYVV

[ACTIVITY]

Paraoxonase 1 (PON1) is responsible for hydrolysing organophosphate pesticides and nerve gasses. PON1 (paraoxonase 1) is also a major anti-atherosclerotic component of high-density lipoprotein (HDL). Besides, Clusterin (CLU) has been identified as an interactor of PON1, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PON1 and recombinant human CLU. Briefly, PON1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to CLU-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-PON1 pAb, then aspirated and washed 3 times. After incubation with HRP

labelled secondary antibody, wells were aspirated and washed 3 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 of PON1 and CLU was shown in Figure 1, and this effect was in a dose dependent manner.

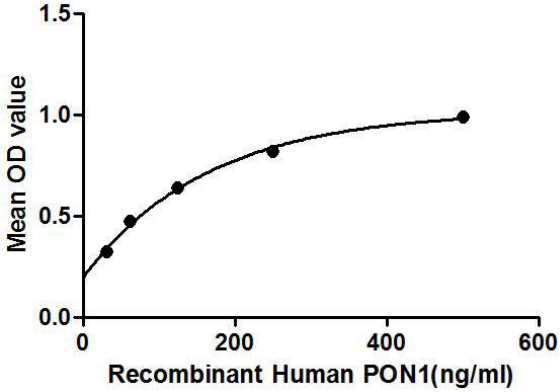

Figure 1. The binding activity of PON1 with CLU.

[IDENTIFICATION]

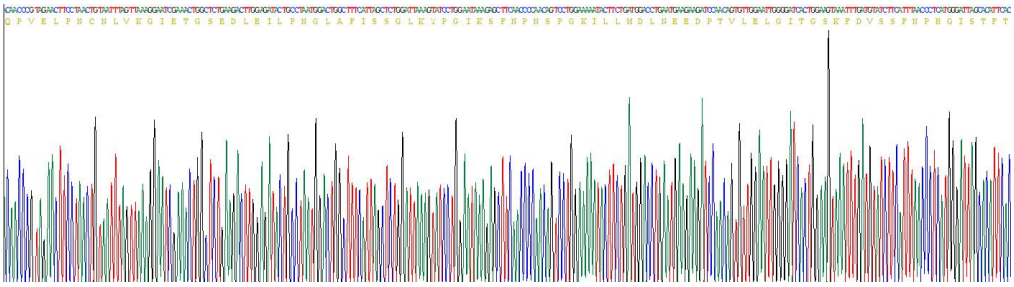

Figure 2. Gene Sequencing (extract)

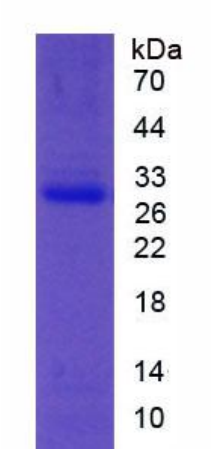

Figure 3. SDS-PAGE

Sample: Active recombinant PON1, Human

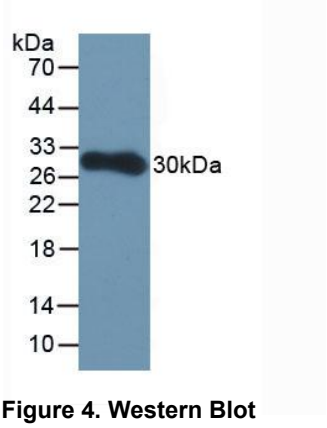

Figure 4. Western Blot

Sample: Recombinant PON1, Human;

Antibody: Rabbit Anti-Human PON1 Ab (PAA243Hu01)