10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PON1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1874a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P27169
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4G8D3
Isotype	IgG1
Calculated MW	39731
Description	The enzyme encoded by this gene is an arylesterase that mainly hydrolyzes paroxon to produce p-nitrophenol. Paroxon is an organophosphorus anticholinesterase compound that is produced in vivo by oxidation of the insecticide parathion. Polymorphisms in this gene are a risk factor in coronary artery disease. The gene is found in a cluster of three related paraoxonase genes at 7q21.3.
Immunogen	Purified recombinant fragment of human PON1 (AA: 20-155) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5444
Other Names	Serum paraoxonase/arylesterase 1, PON 1, 3.1.1.2, 3.1.1.81, 3.1.8.1, Aromatic esterase 1, A-esterase 1, K-45, Serum aryldialkylphosphatase 1, PON1, PON
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1:10~50 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PON1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PON1
Synonyms	PON

Function	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.
Cellular Location	Secreted, extracellular space.
Tissue Location	Plasma, associated with HDL (at protein level). Expressed in liver, but not in heart, brain, placenta, lung, skeletal muscle, kidney or pancreas.

Background

This gene encodes a member of the SOX (SRY-related HMG-box) family of transcription factors involved in the regulation of embryonic development and in the determination of the cell fate. The encoded protein may act as a transcriptional activator after forming a protein complex with other proteins. This protein acts as a nucleocytoplasmic shuttle protein and is important for neural crest and peripheral nervous system development. Mutations in this gene are associated with Waardenburg-Shah and Waardenburg-Hirschsprung disease. ;

References

1. Redox Rep. 2012;17(5):214-8. 2. Cancer Epidemiol. 2012 Apr;36(2):e101-3.

Images

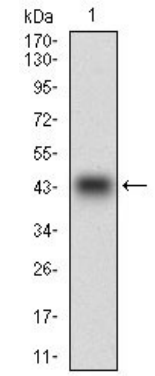


Figure 1: Western blot analysis using PON1 mAb against human PON1 recombinant protein. (Expected MW is 40.6 kDa)

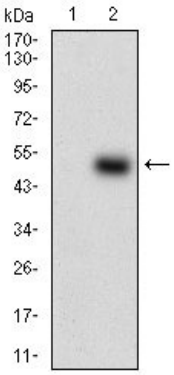
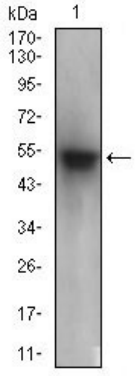


Figure 2: Western blot analysis using PON1 mAb against HEK293 (1) and PON1 (AA: 20-155)-hIgGFc transfected HEK293 (2) cell lysate.

Figure 3: Western blot analysis using PON1 mouse mAb against human plasma cell lysate.



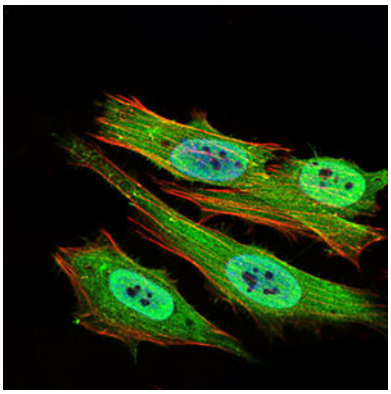


Figure 4: Immunofluorescence analysis of Hela cells using PON1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

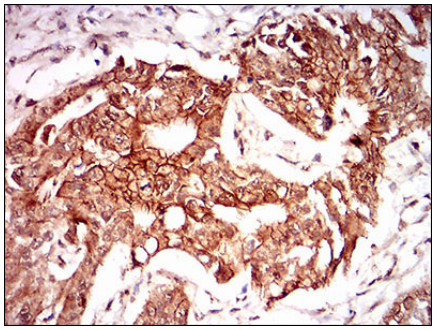


Figure 5: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using PON1 mouse mAb with DAB staining.

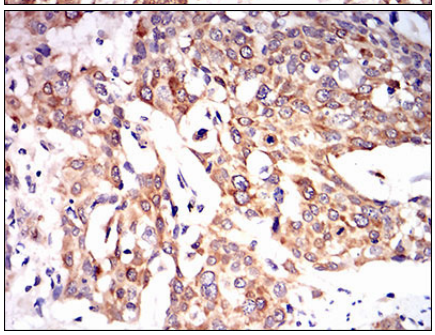


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using PON1 mouse mAb with DAB staining.