

PON3 (F-8): sc-515603

BACKGROUND

Paroxon is an organophosphorus anticholinesterase compound, used topically in the treatment of glaucoma. It is produced *in vivo* in mammals by microsomal oxidation of the insecticide parathion. Parathion is inert until transformed to paroxon. Paroxonase (paraoxonase or PON) is an arylesterase that is capable of hydrolyzing paroxon to produce p-nitrophenol. PONs are nonspecific and their classification is based not only on substrate specificity but also on tissue distribution, inhibition properties, and physicochemical characteristics such as electrophoretic mobility and molecular weight. In contrast to PON1, which is expressed mainly in the liver, PON2 is expressed in a variety of mouse tissues, including the pancreas. PON3 is associated with the high density lipoprotein fraction of serum. The genes which encode PON1-3 are physically linked and map to human chromosome 7q21.3.

REFERENCES

1. Coates, P.M., Mestriner, M.A. and Hopkinson, D.A. 1975. A preliminary genetic interpretation of the esterase isozymes of human tissues. *Ann. Hum. Genet.* 39: 1-20.
2. Humbert, R., Adler, D.A., Disteché, C.M., Hassett, C., Omiecinski, C.J. and Furlong, C.E. 1993. The molecular basis of the human serum paraoxonase activity polymorphism. *Nat. Genet.* 3: 73-76.
3. Primo-Parmo, S.L., Sorenson, R.C., Teiber, J. and La Du, B.N. 1996. The human serum paraoxonase/arylesterase gene (PON1) is one member of a multigene family. *Genomics* 33: 498-507.
4. Mochizuki, H., Scherer, S.W., Xi, T., Nickle, D.C., Majer, M., Huizenga, J.J., Tsui, L.C. and Prochazka, M. 1998. Human PON2 gene at 7q21.3: cloning, multiple mRNA forms, and missense polymorphisms in the coding sequence. *Gene* 213: 149-157.
5. Draganov, D.I., Stetson, P.L., Watson, C.E., Billecke, S.S. and La Du, B.N. 2000. Rabbit serum paraoxonase 3 (PON3) is a high density lipoprotein-associated lactonase and protects low density lipoprotein against oxidation. *J. Biol. Chem.* 275: 33435-33442.
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CHROMOSOMAL LOCATION

Genetic locus: PON3 (human) mapping to 7q21.3; Pon3 (mouse) mapping to 6 A1.

SOURCE

PON3 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 10-35 near the N-terminus of PON3 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515603 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PON3 (F-8) is recommended for detection of PON3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PON3 siRNA (h): sc-106429, PON3 siRNA (m): sc-152389, PON3 shRNA Plasmid (h): sc-106429-SH, PON3 shRNA Plasmid (m): sc-152389-SH, PON3 shRNA (h) Lentiviral Particles: sc-106429-V and PON3 shRNA (m) Lentiviral Particles: sc-152389-V.

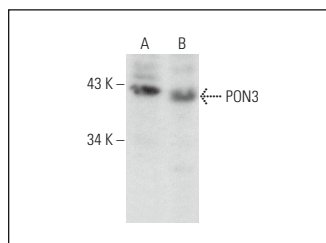
Molecular Weight of PON3: 43 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or human liver extract: sc-363766.

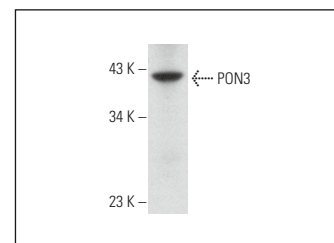
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PON3 (F-8): sc-515603. Western blot analysis of PON3 expression in Hep G2 whole cell lysate (A) and human liver tissue extract (B).



PON3 (F-8): sc-515603. Western blot analysis of PON3 expression in mouse liver tissue extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.