

# Selenoprotein P (N-17): sc-22637

## BACKGROUND

Selenium is an essential trace element that is incorporated as selenocysteine into the primary structure of selenoproteins. Nutritional deficiency of selenium decreases selenoprotein concentrations and leads to pathologic conditions. Most of the known selenoproteins are members of the glutathione peroxidase or iodothyronine deiodinase families. Selenoprotein P (SEPP1) is a major selenoprotein that is not a member of those families. It is an extracellular glycoprotein that is present in several isoforms and is the only selenoprotein known to contain multiple selenocysteine residues. Selenoprotein P is a heparin-binding protein that appears to be associated with endothelial cells and has been implicated as an oxidant defense in the extracellular space. Although there is evidence of several isoforms of the protein, all of them share the same amino-terminal sequence and therefore are likely products of the same gene. The gene which encodes Selenoprotein P maps to human chromosome 5p12.

## REFERENCES

1. Keshan Disease Research Group. 1979. Observations on effect of sodium selenite in prevention of Keshan disease. *Chin. Med. J.* 92: 471-476.
2. Hill, K.E., Lloyd, R.S. and Burk, R.F. 1993. Conserved nucleotide sequences in the open reading frame and 3' untranslated region of Selenoprotein P mRNA. *Proc. Natl. Acad. Sci. USA* 90: 537-541.
3. Hill, K.E., Dasouki, M., Phillips, J.A. III and Burk, R.F. 1996. Human Selenoprotein P gene maps to 5q31. *Genomics* 36: 550-551.
4. Chittum, H.S., Himeno, S., Hill, K.E. and Burk, R.F. 1996. Multiple forms of Selenoprotein P in rat plasma. *Arch. Biochem. Biophys.* 325: 124-128.
5. LocusLink Report (LocusID: 601484). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: SEPP1 (human) mapping to 5p12.

## SOURCE

Selenoprotein P (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Selenoprotein P of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Selenoprotein P (N-17) is recommended for detection of Selenoprotein P of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Selenoprotein P (N-17) is also recommended for detection of Selenoprotein P in additional species, including bovine.

Suitable for use as control antibody for Selenoprotein P siRNA (h): sc-40930, Selenoprotein P shRNA Plasmid (h): sc-40930-SH and Selenoprotein P shRNA (h) Lentiviral Particles: sc-40930-V.

Molecular Weight of Selenoprotein P: 57/45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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



Try **Selenoprotein P (B-9): sc-376858**, our highly recommended monoclonal alternative to Selenoprotein P (N-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Selenoprotein P (B-9): sc-376858**.