

Selenoprotein S (N-13): sc-104653

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 S, also known as VIMP or SELS, is a 189 amino acid single-pass membrane protein that localizes to the endoplasmic reticulum (ER) and contains a selenocysteine (Sec) residue at its active site. Interacting with Derlin-1 and VCP, Selenoprotein S is involved in the degradation of misfolded ER proteins, specifically participating in the transfer of misfolded proteins from the ER to the cytosol for subsequent proteasomal degradation. Aberrant expression of Selenoprotein S is associated with diabetes, cardiovascular disease and rheumatoid arthritis.

REFERENCES

1. Kryukov, G.V., et al. 2003. Characterization of mammalian selenoproteomes. *Science* 300: 1439-1443.
2. Curran, J.E., et al. 2005. Genetic variation in Selenoprotein S influences inflammatory response. *Nat. Genet.* 37: 1234-1241.
3. Kim, K.H., et al. 2007. SEPS1 protects RAW 264.7 cells from pharmacological ER stress agent-induced apoptosis. *Biochem. Biophys. Res. Commun.* 354: 127-132.
4. Seiderer, J., et al. 2007. The role of the selenoprotein S (SELS) gene -105G>A promoter polymorphism in inflammatory bowel disease and regulation of SELS gene expression in intestinal inflammation. *Tissue Antigens* 70: 238-246.
5. Zeng, J., et al. 2008. Role of SelS in lipopolysaccharide-induced inflammatory response in hepatoma Hep G2 cells. *Arch. Biochem. Biophys.* 478: 1-6.
6. Martínez, A., et al. 2008. Polymorphisms in the Selenoprotein S gene: lack of association with autoimmune inflammatory diseases. *BMC Genomics* 9: 329.

CHROMOSOMAL LOCATION

Genetic locus: SELS (human) mapping to 15q26.3; H47 (mouse) mapping to 7 C.

SOURCE

Selenoprotein S (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Selenoprotein S of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104653 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.

APPLICATIONS

Selenoprotein S (N-13) is recommended for detection of Selenoprotein S of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 Selenoprotein S siRNA (h): sc-90187, Selenoprotein S siRNA (m): sc-106542, Selenoprotein S shRNA Plasmid (h): sc-90187-SH, Selenoprotein S shRNA Plasmid (m): sc-106542-SH, Selenoprotein S shRNA (h) Lentiviral Particles: sc-90187-V and Selenoprotein S shRNA (m) Lentiviral Particles: sc-106542-V.

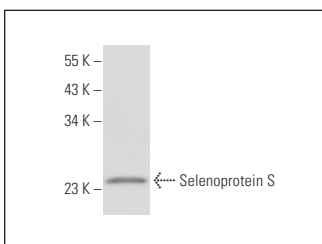
Molecular Weight of Selenoprotein S: 21 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Selenoprotein S (N-13): sc-104653. Western blot analysis of Selenoprotein S expression in IMR-32 whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Selenoprotein S (D-1): sc-365498**, our highly recommended monoclonal alternative to Selenoprotein S (N-13).