

Selenoprotein W (N-18): sc-22640

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. The Selenoprotein N glycoprotein localizes to the endoplasmic reticulum (ER) and contains selenocysteine at its active site. There are two isoforms associated with Selenoprotein N: isoform 1, the full-length transcript; and isoform 2, which lacks exon 3. Seleno-protein N is primarily expressed in skeletal muscle, brain, lung and placenta, but isoform 2 can also be detected in heart and stomach tissues. Mutations in SEP1, the gene encoding for Selenoprotein, cause multiminicore disease and rigid spine muscular dystrophy.

REFERENCES

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2. Vendeland, S.C., et al. 1993. Purification and properties of Selenoprotein W from rat muscle. *J. Biol. Chem.* 268: 17103-17107.
3. Vendeland, S.C., et al. 1995. Rat skeletal muscle Selenoprotein W: cDNA clone and mRNA modulation by dietary selenium. *Proc. Natl. Acad. Sci. USA* 92: 8749-8753.
4. Hill, K.E., et al. 1996. Human Selenoprotein P gene maps to 5q31. *Genomics* 36: 550-551.
5. Gu, Q.P., et al. 1997. Conserved features of selenocysteine insertion sequence (SECIS) elements in Selenoprotein W cDNAs from five species. *Gene* 193: 187-196.
6. Gu, Q.P., et al. 2000. Selenoprotein W accumulates primarily in primate skeletal muscle, heart, brain and tongue. *Mol. Cell. Biochem.* 204: 49-56.
7. Jeong, D., et al. 2002. Selenoprotein W is a glutathione-dependent antioxidant *in vivo*. *FEBS Lett.* 517: 225-228.
8. Jeong, D.W., et al. 2004. Different distributions of Selenoprotein W and thioredoxin during postnatal brain development and embryogenesis. *Mol. Cells* 17: 156-159.

CHROMOSOMAL LOCATION

Genetic locus: SEPW1 (human) mapping to 19q13.33; Sepw1 (mouse) mapping to 7 A2.

SOURCE

Selenoprotein W (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Selenoprotein W of human origin.

STORAGE

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

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-22640 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Selenoprotein W (N-18) is recommended for detection of Selenoprotein W of mouse, rat and 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 W (N-18) is also recommended for detection of Selenoprotein W in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Selenoprotein W siRNA (h): sc-40932, Selenoprotein W siRNA (m): sc-40933, Selenoprotein W shRNA Plasmid (h): sc-40932-SH, Selenoprotein W shRNA Plasmid (m): sc-40933-SH, Selenoprotein W shRNA (h) Lentiviral Particles: sc-40932-V and Selenoprotein W shRNA (m) Lentiviral Particles: sc-40933-V.

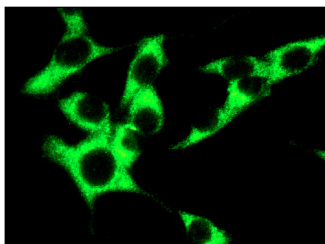
Molecular Weight of Selenoprotein W: 10 kDa.

Positive Controls: Sol8 cell lysate: sc-2249.

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.

DATA



Selenoprotein W (N-18): sc-22640. Immunofluorescence staining of methanol-fixed Sol 8 cells showing cytoplasmic localization.

RESEARCH USE

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