

SO (F-6): sc-393688

BACKGROUND

Sulfite oxidase (SO), a homodimeric protein that localizes to the intermembrane space of mitochondria, catalyzes the oxidation of sulfite to sulfate, the terminal reaction in the oxidative degradation of the sulfur amino acids cysteine and methionine. Genetic deficiency of SO contributes to neurological abnormalities and often leads to death at an early age. Mutation of arginine 160 in humans decreases the intramolecular electron transfer (IET) rate, which contributes to the fatality of this genetic disorder. Also, the tyrosine 343 residue in humans plays an important role in both substrate binding and oxidation of sulfite by SO. The human SO gene maps to chromosome 12, and shows high expression in liver, kidney, skeletal muscle, heart, placenta and brain.

REFERENCES

1. Kisker, C., et al. 1997. Molecular basis of sulfite oxidase deficiency from the structure of sulfite oxidase. *Cell* 91: 973-983.
2. Garrett, R.M., et al. 1998. Human sulfite oxidase R160Q: identification of the mutation in a sulfite oxidase-deficient patient and expression and characterization of the mutant enzyme. *Proc. Natl. Acad. Sci. USA* 95: 6394-6398.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606887. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Feng, C., et al. 2003. Essential role of conserved arginine 160 in intramolecular electron transfer in human sulfite oxidase. *Biochemistry* 42: 12235-12242.

CHROMOSOMAL LOCATION

Genetic locus: SUOX (human) mapping to 12q13.2; Suox (mouse) mapping to 10 D3.

SOURCE

SO (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-130 near the N-terminus of SO of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SO (F-6) is available conjugated to agarose (sc-393688 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393688 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393688 PE), fluorescein (sc-393688 FITC), Alexa Fluor® 488 (sc-393688 AF488), Alexa Fluor® 546 (sc-393688 AF546), Alexa Fluor® 594 (sc-393688 AF594) or Alexa Fluor® 647 (sc-393688 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393688 AF680) or Alexa Fluor® 790 (sc-393688 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393688 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

SO (F-6) is recommended for detection of precursor and mature SO 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 SO siRNA (h): sc-44404, SO siRNA (m): sc-44405, SO shRNA Plasmid (h): sc-44404-SH, SO shRNA Plasmid (m): sc-44405-SH, SO shRNA (h) Lentiviral Particles: sc-44404-V and SO shRNA (m) Lentiviral Particles: sc-44405-V.

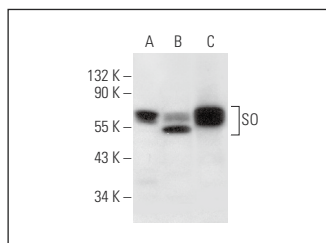
Molecular Weight of SO: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, c4 whole cell lysate: sc-364186 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 A/G PLUS-Agarose: sc-2003 (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



SO (F-6): sc-393688. Western blot analysis of SO expression in Hep G2 (A) and c4 (B) whole cell lysates and human liver tissue extract (C).

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.