SANTA CRUZ BIOTECHNOLOGY, INC.

Sulfiredoxin (E-7): sc-166566

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sulfiredoxin, also designated Sulfiredoxin-1 and chromosome 20 open reading frame 139 (C20orf139), is a cytoplasmic antioxidant protein involved in signaling through catalytic reduction of oxidative modifications. It regulates peroxiredoxins (PRXs), a family of proteins that reduce hydroperoxides, by reducing the conserved cysteine from sulfinic to sulfenic acid. This impacts the role of PRX in the reduction of other downstream transcription factors and kinase signaling pathways. The Sulfiredoxin protein specifically acts on the PRDX1, PRDX2, PRDX3 and PRDX4 peroxiredoxins, but not on PRDX5 or PRDX6. Sulfiredoxin acts as a phosphotransferase and an athioltransferase and is widely expressed, with highest levels detected in lung, spleen, kidney and thymus tissues.

CHROMOSOMAL LOCATION

Genetic locus: SRXN1 (human) mapping to 20p13; Srxn1 (mouse) mapping to 2 G3.

SOURCE

Sulfiredoxin (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 115-140 at the C-terminus of Sulfiredoxin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-166566 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Sulfiredoxin (E-7) is recommended for detection of Sulfiredoxin 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).

Sulfiredoxin (E-7) is also recommended for detection of Sulfiredoxin in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Sulfiredoxin siRNA (h): sc-61622, Sulfiredoxin siRNA (m): sc-61623, Sulfiredoxin shRNA Plasmid (h): sc-61622-SH, Sulfiredoxin shRNA Plasmid (m): sc-61623-SH, Sulfiredoxin shRNA (h) Lentiviral Particles: sc-61622-V and Sulfiredoxin shRNA (m) Lentiviral Particles: sc-61623-V.

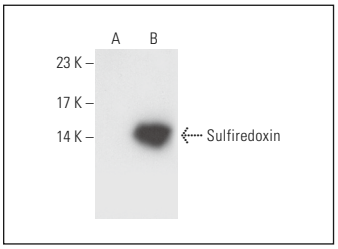
Molecular Weight of Sulfiredoxin: 13 kDa.

Positive Controls: Sulfiredoxin (h): 293T Lysate: sc-112169.

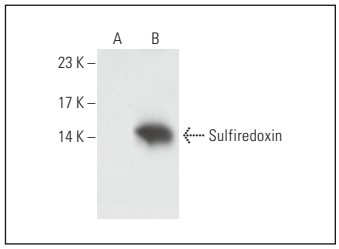
RECOMMENDED SUPPORT REAGENTS

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



Sulfiredoxin (E-7): sc-166566. Western blot analysis of Sulfiredoxin expression in non-transfected: sc-117752 (**A**) and human Sulfiredoxin transfected: sc-116088 (**B**) 293T whole cell lysates.



Sulfiredoxin (E-7): sc-166566. Western blot analysis of Sulfiredoxin expression in non-transfected: sc-117752 (**A**) and human Sulfiredoxin transfected: sc-112169 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wu, C.L., et al. 2012. c-Jun-dependent Sulfiredoxin induction mediates BDNF protection against mitochondrial inhibition in rat cortical neurons. Neurobiol. Dis. 46: 450-462.
2. Abbas, K., et al. 2013. Peroxiredoxins and Sulfiredoxin at the crossroads of the NO and H_2O_2 signaling pathways. Methods Enzymol. 527: 113-128.

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.