

Rhodanese (H-75): sc-20959

BACKGROUND

Rhodanese (also known as thiosulfate sulfurtransferase) is a mitochondrial matrix enzyme that is encoded by the nucleus. Rhodanese is a 297-residue polypeptide and has been proposed to play roles in cyanide detoxification, the formation of iron-sulfur proteins, and the modification of sulfur-containing enzymes. Rhodanese was first identified in human red cells in 1956 and has been crystallized from beef liver. In mammals, most cyanide is converted to thiocyanate by the rhodanese. There is an association between Leber's optic neuropathy and deficiency of rhodanese activity in liver and rectal mucosa. Greatly reduced activity of this enzyme has been observed in the livers of two males with Leber optic atrophy from a well-studied Swiss family with five symptomatic persons in four generations. The red cell and tissue rhodanese are determined by separate genes, but more than one locus may be concerned with the synthesis of heterogeneous tissue isozymes. The gene which encodes rhodanese maps to human chromosome 22q11.2-qter.

CHROMOSOMAL LOCATION

Genetic locus: TST (human) mapping to 22q12.3; Tst (mouse) mapping to 15 E1.

SOURCE

Rhodanese (H-75) is a rabbit polyclonal antibody raised against amino acids 36-110 mapping near the N-terminus of Rhodanese 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.

APPLICATIONS

Rhodanese (H-75) is recommended for detection of Rhodanese 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rhodanese (H-75) is also recommended for detection of Rhodanese in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rhodanese siRNA (h): sc-36418, Rhodanese siRNA (m): sc-36419, Rhodanese shRNA Plasmid (h): sc-36418-SH, Rhodanese shRNA Plasmid (m): sc-36419-SH, Rhodanese shRNA (h) Lentiviral Particles: sc-36418-V and Rhodanese shRNA (m) Lentiviral Particles: sc-36419-V.

Molecular Weight of Rhodanese: 33-55 kDa.

Positive Controls: mouse liver extract: sc-2256, rat liver extract: sc-2395 or Hep G2 cell lysate: sc-2227.

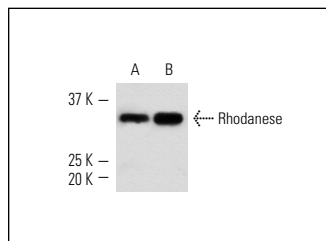
RESEARCH USE

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

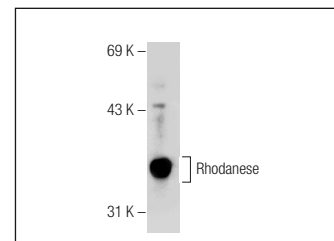
STORAGE

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

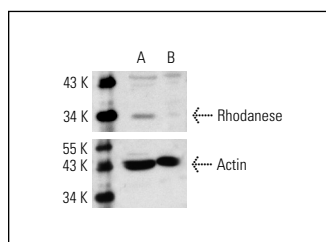
DATA



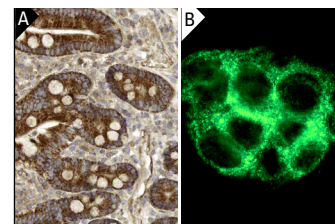
Rhodanese (H-75): sc-20959. Western blot analysis of Rhodanese expression in mouse (A) and rat (B) liver tissue extracts.



Rhodanese (H-75): sc-20959. Western blot analysis of Rhodanese expression mouse liver tissue extract.



Rhodanese siRNA (h): sc-36418. Western blot analysis of Rhodanese expression in non-transfected control (A) and Rhodanese siRNA transfected (B) HeLa cells. Blot probed with Rhodanese (H-75): sc-20959. Actin (I-19): sc-1616 used as specificity and loading control.



Rhodanese (H-75): sc-20959. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Shi, T., et al. 2013. Novel proteins associated with human dilated cardiomyopathy: selective reduction in α_{1A} -adrenergic receptors and increased desensitization proteins. *J. Recept. Signal Transduct. Res.* 33: 96-106.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Rhodanese (G-7): sc-271883** or **Rhodanese (E-11): sc-365562**, our highly recommended monoclonal alternatives to Rhodanese (H-75).