

Rhodanese (N-20): sc-21237

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 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.

REFERENCES

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- Aita, N., et al. 1997. Cloning and expression of human liver Rhodanese cDNA. *Biochem. Biophys. Res. Commun.* 231: 56-60.
- Tan, G., et al. 2003. Decreased expression of genes involved in sulfur amino acid metabolism in frataxin-deficient cells. *Hum. Mol. Genet.* 12: 1699-1711.
- Horibe, T., et al. 2004. Different contributions of the three CXXC motifs of human protein-disulfide isomerase-related protein to isomerase activity and oxidative refolding. *J. Biol. Chem.* 279: 4604-4611.
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CHROMOSOMAL LOCATION

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

SOURCE

Rhodanese (N-20) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-21237 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

Rhodanese (N-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

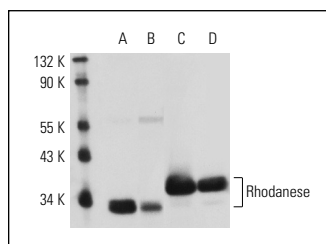
Rhodanese (N-20) is also recommended for detection of Rhodanese in additional species, including equine, canine, bovine and porcine.

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: 33-35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or rat liver extract: sc-2395.

DATA



Rhodanese (N-20): sc-21237. Western blot analysis of Rhodanese expression in Hep G2 (A) and HeLa (B) whole cell lysates and in rat kidney (C) and mouse liver (D) tissue extracts.

SELECT PRODUCT CITATIONS

- Xie, J., et al. 2010. Lectin-like oxidized low-density lipoprotein receptor-1 delivers heat shock protein 60-fused antigen into the MHC class I presentation pathway. *J. Immunol.* 185: 2306-2313.

RESEARCH USE

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

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 (N-20).