



Grx1 (h): 293T Lysate: sc-111653

BACKGROUND

Glutaredoxin (Grx) and a relative, thioredoxin, catalyze general thiol-disulfide oxidoreductions and act as hydrogen donors for ribonucleotide reductase, an enzyme essential for DNA synthesis. Proteins which catalyze thiol-disulfide exchange reactions are required for electron and proton transport to essential enzymes like ribonucleotide reductase, for the formation of disulfide bonds during protein folding, and for general regulation of protein function by thiol redox control. These proteins also play a role in cellular defense against oxidative stress. The thioredoxin superfamily includes a number of proteins with the same basic folding and structure as thioredoxin and glutaredoxin, with the active site at the C-terminal end of a β -strand followed by an α -helix. Glutaredoxin (Grx) operates in thiol-disulfide reactions via two vicinal (CXYC) active site cysteine residues, which either form a disulfide (oxidized form) or a dithiol (reduced form). Mammalian cells contain at least two dithiol glutaredoxins: Grx1, the cytoplasmic form; and Grx2, which has mitochondrial and nuclear isoforms. Nuclear Grx2, unlike Grx1, is a substrate for thioredoxin reductase and has a higher affinity for S-glutathionylated proteins.

REFERENCES

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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: GLRX (human) mapping to 5q15.

PRODUCT

Grx1 (h): 293T Lysate represents a lysate of human Grx1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Grx1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Grx1 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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