SANTA CRUZ BIOTECHNOLOGY, INC.

selenocysteine lyase (m): 293T Lysate: sc-123439

BACKGROUND

Selenocysteine lyase (SCL) catalyzes the decomposition of L-selenocysteine to L-alanine and elemental selenium. The reaction depends on the presence of pyridoxal 5'-phosphate as a cofactor, and occurs in liver, kidney, heart, adrenal and muscle tissue. This regulation by the 5'-phosphate resembles the regulatory mechanisms for other enzymes, including aspartate β-decarboxylase, arginine racemase and kynureninase. SCL potentially functions as a selenium delivery protein to selenophosphate synthetase, facilitating selenoprotein biosynthesis.

REFERENCES

1. Esaki, N., et al. 1985. Mechanism of reactions catalyzed by selenocysteine β-lyase. Arch. Biochem. Biophys. 238: 418-423.
2. Daher, R. and Van Lente, F. 1992. Characterization of selenocysteine lyase in human tissues and its relationship to tissue selenium concentrations. J. Trace Elem. Electrolytes Health Dis. 6: 189-194.
3. Mihara, H., et al. 2000. cDNA cloning, purification, and characterization of mouse liver selenocysteine lyase. Candidate for selenium delivery protein in selenoprotein synthesis. J. Biol. Chem. 275: 6195-6200.
4. Mihara, H., et al. 2000. Kinetic and mutational studies of three NifS homologs from *Escherichia coli:* mechanistic difference between L-cysteine desulfurase and L-selenocysteine lyase reactions. J. Biochem. 127: 559-567.
5. Mihara, H., et al. 2002. Selenocysteine lyase from mouse liver. Methods Enzymol. 347: 198-203.
6. Pilon, M., et al. 2003. Enhanced selenium tolerance and accumulation in transgenic *Arabidopsis* expressing a mouse selenocysteine lyase. Plant Physiol. 131: 1250-1257.
7. Stadtman, T. 2004. *Methanococcus vannielii* selenium metabolism: purification and N-terminal amino acid sequences of a novel selenium-binding protein and selenocysteine lyase. IUBMB Life 56: 427-431.

CHROMOSOMAL LOCATION

Genetic locus: Scly (mouse) mapping to 1 D.

PRODUCT

selenocysteine lyase (m): 293T Lysate represents a lysate of mouse selenocysteine lyase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

selenocysteine lyase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive selenocysteine lyase antibodies. Recommended use: 10-20 µl 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.

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.