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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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cyt19 (m): 293T Lysate: sc-119612

BACKGROUND

Formation of methylated metabolites is a critical step in the metabolism of inorganic arsenic. Arsenite methyltransferase (cyt19) is localized to the cytoplasm and operates in the transfer of a methyl group from AdoMet to trivalent arsenicals producing methylated and dimethylated arsenicals. It methylates arsenite to form methylarsonate which is reduced to methylarsonite. Methylarsonite acts as a substrate and is converted into a much less toxic compound dimethylarsinate. cyt19 is highly expressed in liver. Inherited variation in cyt19 may contribute to variation in arsenic metabolism and possibly arsenic-dependent carcinogenesis in humans.

REFERENCES

- Walton, F.S., Waters, S.B., Jolley, S.L., LeCluyse, E.L., Thomas, D.J. and Styblo, M. 2003. Selenium compounds modulate the activity of recombinant rat AsIII-methyl and the methylation of arsenite by rat and human hepatocytes. *Chem. Res. Toxicol.* 16: 261-265.
- Waters, S.B., Devesa, V., Del Razo, L.M., Styblo, M. and Thomas, D.J. 2004. Endogenous reductants support the catalytic function of recombinant rat cyt19, an arsenic methyltransferase. *Chem. Res. Toxicol.* 17: 404-409.
- Thomas, D.J., Waters, S.B. and Styblo, M. 2004. Elucidating the pathway for arsenic methylation. *Toxicol. Appl. Pharmacol.* 198: 319-326.
- Drobn, Z., Waters, S.B., Walton, F.S., LeCluyse, E.L., Thomas, D.J. and Styblo, M. 2004. Interindividual variation in the metabolism of arsenic in cultured primary human hepatocytes. *Toxicol. Appl. Pharmacol.* 201: 166-177.
- Hayakawa, T., Kobayashi, Y., Cui, X. and Hirano, S. 2005. A new metabolic pathway of arsenite: arsenic-glutathione complexes are substrates for human arsenic methyltransferase Cyt19. *Arch. Toxicol.* 79: 183-191.
- Meza, M.M., Yu, L., Rodriguez, Y.Y., Guild, M., Thompson, D., Gandolfi, A.J. and Klimecki, W.T. 2005. Developmentally restricted genetic determinants of human arsenic metabolism: association between urinary methylated arsenic and CYT19 polymorphisms in children. *Environ. Health Perspect.* 113: 775-781.
- Wood, T.C., Salavagionne, O.E., Mukherjee, B., Wang, L., Klumpp, A.F., Thomae, B.A., Eckloff, B.W., Schaid, D.J., Wieben, E.D. and Weinshilboum, R.M. 2006. Human arsenic and functional genomics studies. *J. Biol. Chem.* 281: 7364-7373.

CHROMOSOMAL LOCATION

Genetic locus: As3mt (mouse) mapping to 19 C3.

PRODUCT

cyt19 (m): 293T Lysate represents a lysate of mouse cyt19 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

cyt19 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive cyt19 antibodies. Recommended use: 10-20 µl per lane.

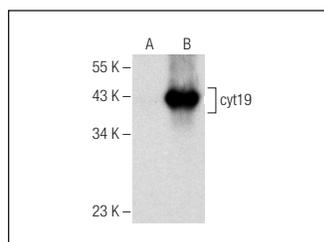
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

cyt19 (D-1): sc-376537 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse cyt19 expression in cyt19 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



cyt19 (D-1): sc-376537. Western blot analysis of cyt19 expression in non-transfected: sc-117752 (A) and mouse cyt19 transfected: sc-119612 (B) 293T whole cell lysates.

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.