

AKR1C6 (m): 293T Lysate: sc-118318

BACKGROUND

Members of the AKR family are soluble NADPH-dependent oxidoreductases that play important roles in the metabolism of drugs, carcinogens and reactive aldehydes and may also act as bile acid-binding proteins. There are 12 human ARK proteins and 15 rodent ARK proteins, all of which functions as oxidoreductases that may regulate a variety of reactions throughout the cell. AKR1C6, also known as estradiol 17 β -dehydrogenase 5, is a 323 amino acid mouse ARK protein. AKR1C6 acts as an oxidoreductase for estrogens, androgens and xenobiotic substrates. Expressed predominantly in the liver, AKR1C6 has α -stereospecificity in the hydrogen transfer between cofactors and substrates.

REFERENCES

1. Deyashiki, Y., Ohshima, K., Nakanishi, M., Sato, K., Matsuura, K. and Hara, A. 1995. Molecular cloning and characterization of mouse estradiol 17 β -dehydrogenase (A-specific), a member of the aldoketoreductase family. *J. Biol. Chem.* 270: 10461-10467.
2. Rheault, P., Charbonneau, A. and Luu-The, V. 1999. Structure and activity of the murine type 5 17 β -hydroxysteroid dehydrogenase gene. *Biochim. Biophys. Acta* 1447: 17-24.
3. Penning, T.M., Burczynski, M.E., Jez, J.M., Hung, C.F., Lin, H.K., Ma, H., Moore, M., Palackal, N. and Ratnam, K. 2000. Human 3 α -hydroxysteroid dehydrogenase isoforms (AKR1C1-AKR1C4) of the aldo-keto reductase superfamily: functional plasticity and tissue distribution reveals roles in the inactivation and formation of male and female sex hormones. *Biochem. J.* 351: 67-77.
4. Napoli, J.L. 2001. 17 β -hydroxysteroid dehydrogenase type 9 and other short-chain dehydrogenases/reductases that catalyze retinoid, 17 β - and 3 α -hydroxysteroid metabolism. *Mol. Cell. Endocrinol.* 171: 103-109.
5. Vergnes, L., Phan, J., Stolz, A. and Reue, K. 2003. A cluster of eight hydroxysteroid dehydrogenase genes belonging to the aldo-keto reductase supergene family on mouse chromosome 13. *J. Lipid Res.* 44: 503-511.
6. Matsumoto, K., Endo, S., Ishikura, S., Matsunaga, T., Tajima, K., El-Kabbani, O. and Hara, A. 2006. Enzymatic properties of a member (AKR1C20) of the aldo-keto reductase family. *Biol. Pharm. Bull.* 29: 539-542.
7. Tremblay, Y. and Provost, P.R. 2006. 17 β -HSD type 5 expression and the emergence of differentiated epithelial type II cells in fetal lung: a novel role for androgen during the surge of surfactant. *Mol. Cell. Endocrinol.* 248: 118-125.
8. Provost, P.R. and Tremblay, Y. 2007. Mouse 3 α -hydroxysteroid dehydrogenase mRNA: a marker of lung maturity. *J. Steroid Biochem. Mol. Biol.* 103: 61-64.

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: Akr1c6 (mouse) mapping to 13 A1.

PRODUCT

AKR1C6 (m): 293T Lysate represents a lysate of mouse AKR1C6 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

AKR1C6 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive AKR1C6 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.