



## AKR7 (h2): 293T Lysate: sc-173982

### BACKGROUND

Aldo-keto reductase 7 (AKR7) functions in the metabolism of aflatoxin B1 and other dicarbonyl-containing compounds with ketone groups on adjacent carbon atoms in a broad range of tissues, notably the liver. The AKR7 gene maps to human chromosome 1p36.13, a region frequently deleted in sporadic colorectal cancer. The functional significance of this correlation lies in the constitutive expression of AKR7 in human liver to eliminate aflatoxin (an environmental carcinogen), thus acting as an endogenous chemo-preventative agent.

### REFERENCES

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3. Kelly, V.P., et al. 2000. Purification from rat liver of a novel constitutively expressed member of the aldo-keto reductase 7 family that is widely distributed in extrahepatic tissues. *Biochem. J.* 348: 389-400.
4. Kelly, V.P., et al. 2002. Novel homodimeric and heterodimeric rat  $\gamma$ -hydroxybutyrate synthases that associate with the Golgi apparatus define a distinct subclass of aldo-keto reductase 7 family proteins. *Biochem. J.* 366: 847-861.
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6. Hyndman, D., et al. 2003. The aldo-keto reductase superfamily homepage. *Chem Biol Interact.* 143-144: 621-631.
7. Kozma, E., et al. 2003. The high resolution crystal structure of rat liver AKR7A1: understanding the substrate specificities of the AKR7 family. *Chem Biol Interact.* 143-144: 289-297.
8. Grant, A.W., et al. 2003. A novel aldo-keto reductase from *Escherichia coli* can increase resistance to methylglyoxal toxicity. *FEMS Microbiol Lett.* 218: 93-99.
9. Gardner, R., et al. 2004. Detoxication of the environmental pollutant acrolein by a rat liver aldo-keto reductase. *Toxicol Lett.* 148: 65-72.

### CHROMOSOMAL LOCATION

Genetic locus: AKR7A2 (human) mapping to 1p36.13.

### 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.

### RESEARCH USE

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

### PRODUCT

AKR7 (h2): 293T Lysate represents a lysate of human AKR7 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

### APPLICATIONS

AKR7 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive AKR7 antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.