SANTA CRUZ BIOTECHNOLOGY, INC.

AKR7A3 (h2): 293T Lysate: sc-114111

BACKGROUND

AKR7A3 (aldo/keto reductase family 7, member A3), also known as AFAR2, is a 331 amino acid protein that localizes to the cytoplasm and belongs to the aldo/keto reductase family. Expressed in pancreas, colon, kidney and endometrial tissue, AKR7A3 functions as a probable homodimer that is involved in the detoxification of aldehydes and ketones. Specifically, AKR7A3 can reduce the dialdehyde protein-binding form of aflatoxin B1 (AFB1), a hepatocarcinogen, to a non-binding form of AFB1, thereby protecting liver tissue from the toxic and carcinogenic effects of AFB1. The gene encoding AKR7A3 maps to human chromosome 1, which which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

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3. Praml, C., Savelyeva, L. and Schwab, M. 2003. Aflatoxin B1 aldehyde reductase (AFAR) genes cluster at 1p35-1p36.1 in a region frequently altered in human tumour cells. Oncogene 22: 4765-4773.
4. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608477. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Weise, A., Starke, H., Mrasek, K., Claussen, U. and Liehr, T. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
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CHROMOSOMAL LOCATION

Genetic locus: AKR7A3 (human) mapping to 1p36.13.

PRODUCT

AKR7A3 (h2): 293T Lysate represents a lysate of human AKR7A3 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.

RESEARCH USE

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

APPLICATIONS

AKR7A3 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive AKR7A3 antibodies. Recommended use: 10-20 µl per lane.

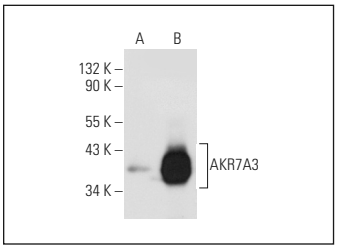
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

AKR7A (E-9): sc-137187 is recommended as a positive control antibody for Western Blot analysis of enhanced human AKR7A3 expression in AKR7A3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

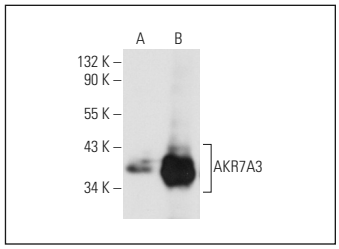
RECOMMENDED SUPPORT REAGENTS

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



AKR7A (E-9): sc-137187. Western blot analysis of AKR7A3 expression in non-transfected: sc-117752 (**A**) and human AKR7A3 transfected: sc-114111 (**B**) 293T whole cell lysates.



AKR7A (F-8): sc-137186. Western blot analysis of AKR7A3 expression in non-transfected: sc-117752 (**A**) and human AKR7A3 transfected: sc-114111 (**B**) 293T whole cell lysates.

PROTOCOLS

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