

Carbonyl reductase 1 (m): 293T Lysate: sc-118997

BACKGROUND

Carbonyl reductase 1 and Carbonyl reductase 3 belong to the family of short-chain dehydrogenase/reductase proteins that play a role in metabolism throughout the body. Both proteins are monomeric carbonyl reductases that function to catalyze the NADPH-dependent reduction of various carbonyls (generally products of lipid peroxidation) to their corresponding alcohols. Carbonyl reductase 1 and Carbonyl reductase 3 share high sequence similarity at the amino acid level and are responsible for the metabolism of not only endogenous compounds, but of various pharmacological products as well. Genetic polymorphisms in both proteins result in individual variability at the level of drug metabolism. Defects in the genes encoding carbonyl reductase proteins have implications in cancer, diabetes and errors in metabolism.

REFERENCES

1. Watanabe, K., et al. 1999. Mapping of a novel human carbonyl reductase, CBR3 and ribosomal pseudogenes to human chromosome 21q22.2. *Genomics* 52: 95-100.
2. Terada, T., et al. 2001. Cloning and bacterial expression of monomeric short-chain dehydrogenase/reductase (Carbonyl reductase) from CHO-K1 cells. *Eur. J. Biochem.* 267: 6849-6857.
3. Olson, L.E., et al. 2003. Protection from doxorubicin-induced cardiac toxicity in mice with a null allele of Carbonyl reductase 1. *Cancer Res.* 63: 6602-6606.
4. Lakhman, S.S., et al. 2005. Functional significance of a natural allelic variant of human Carbonyl reductase 3 (CBR3). *Drug Metab. Dispos.* 33: 254-257.
5. Bergholdt, R., et al. 2005. Fine mapping of a region on chromosome 21q21.11-q22.3 showing linkage to type 1 diabetes. *J. Med. Genet.* 42: 17-25.

CHROMOSOMAL LOCATION

Genetic locus: Cbr1 (mouse) mapping to 16 C4.

PRODUCT

Carbonyl reductase 1 (m): 293T Lysate represents a lysate of mouse Carbonyl reductase 1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Carbonyl reductase 1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Carbonyl reductase 1 antibodies. Recommended use: 10-20 µl per lane.

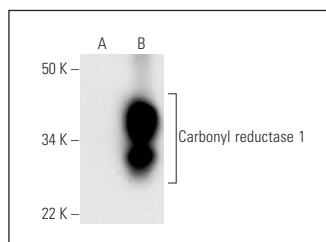
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Carbonyl reductase 1 (B-11): sc-390554 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Carbonyl reductase 1 expression in Carbonyl reductase 1 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



Carbonyl reductase 1 (B-11): sc-390554. Western blot analysis of Carbonyl reductase 1 expression in non-transfected: sc-117752 (A) and mouse Carbonyl reductase 1 transfected: sc-118997 (B) 293T whole cell lysates.

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.

PROTOCOLS

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