

# Carbonyl reductase 1 (A-13): sc-70211

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Carbonyl reductase 1 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Carbonyl reductase 1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-70211 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Carbonyl reductase 1 (A-13) is recommended for detection of Carbonyl reductase 1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Carbonyl reductase 1 (A-13) is also recommended for detection of Carbonyl reductase 1 in additional species, including porcine and avian.

Suitable for use as control antibody for Carbonyl reductase 1 siRNA (m): sc-72792, Carbonyl reductase 1 shRNA Plasmid (m): sc-72792-SH and Carbonyl reductase 1 shRNA (m) Lentiviral Particles: sc-72792-V.

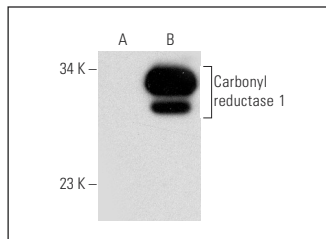
Molecular Weight of Carbonyl reductase 1: 30 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Carbonyl reductase 1 (A-13): sc-70211. 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 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Carbonyl reductase 1 (B-11): sc-390554** or **Carbonyl reductase 1 (Z-8): sc-100518**, our highly recommended monoclonal alternatives to Carbonyl reductase 1 (A-13).