

# CAR1 (M-20): sc-8539

## BACKGROUND

The CAR 'constitutively acting receptor' proteins, CAR1 and CAR2, are mouse nuclear hormone receptors. CAR1 and CAR2, along with their human homolog, MB67, are in highest expression in the liver and belong to a group of receptors known as orphan receptors due to their lack of a known ligand. Unlike conventional hormone receptors which activate transcription upon binding with steroids, retinoids, and thyroid hormones, the CAR and MB67 orphan receptors are transcriptionally active in the absence of exogenous hormone. The CAR and MB67 orphan receptors bind to DNA in the form of a heterodimer with the retinoic-X receptor and activate gene transcription in a constitutive manner.

## REFERENCES

1. Davies, P., et al. 1988. The structure and function of steroid receptors. *Sci. Prog.* 72: 563-578.
2. Baes, M., et al. 1994. A new orphan member of the nuclear hormone receptor superfamily that interacts with a subset of retinoic acid response elements. *Mol. Cell. Biol.* 14: 1544-1551.
3. Mangelsdorf, D.J., et al. 1995. The RXR heterodimers and orphan receptors. *Cell* 83: 841-850.
4. Choi, H.S., et al. 1997. Differential transactivation by two isoforms of the orphan nuclear hormone receptor CAR. *J. Biol. Chem.* 272: 23565-23571.
5. Forman, B.M., et al. 1998. Androstane metabolites bind to and deactivate the nuclear receptor CAR-beta. *Nature* 395: 612-615.

## CHROMOSOMAL LOCATION

Genetic locus: NR1I3 (human) mapping to 1q23.3; Nr1i3 (mouse) mapping to 1 92.6 cM (1 H3).

## SOURCE

CAR1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CAR1 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-8539 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

CAR1 (M-20) is recommended for detection of CAR1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for CAR1/2 siRNA (m): sc-43663, CAR1/2 shRNA Plasmid (m): sc-43663-SH and CAR1/2 shRNA (m) Lentiviral Particles: sc-43663-V.

Molecular Weight of CAR1: 46 kDa.

Positive Controls: mouse liver extract: sc-2256.

## 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) 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.