SANTA CRUZ BIOTECHNOLOGY, INC.

CAR1/2 (M-127): sc-13065

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: NR1I3 (human) mapping to 1q23.3, Car1/Car2 (mouse) mapping to 3 A1.

SOURCE

CAR1/2 (M-127) is a rabbit polyclonal antibody raised against amino acids 70-197 mapping near the N-terminus of CAR 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.

APPLICATIONS

CAR1/2 (M-127) is recommended for detection of CAR1 and CAR2 of mouse and rat origin and MB67 of human 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).

Suitable for use as control antibody for MB67 siRNA (h): sc-39918, CAR1/2 siRNA (m): sc-43663, MB67 shRNA Plasmid (h): sc-39918-SH, CAR1/2 shRNA Plasmid (m): sc-43663-SH, MB67 shRNA (h) Lentiviral Particles: sc-39918-V and CAR1/2 shRNA (m) Lentiviral Particles: sc-43663-V.

Molecular Weight of CAR1: 46 kDa.

Positive Controls: Mouse liver extract: sc-2256.

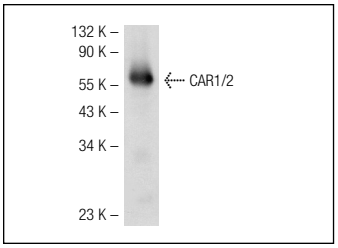
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

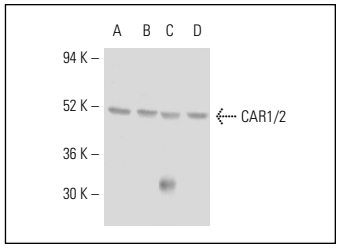
RESEARCH USE

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

DATA



CAR1/2 (M-127): sc-13065. Western blot analysis of CAR1/2 expression in mouse liver tissue extract.



CAR1/2 (M-150): sc-13065. Western blot analysis of CAR1/2 expression in C4 (**A**) and EOC 20 (**B**) whole cell lysates and mouse brain (**C**) and rat liver (**D**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Jia, Y., et al. 2005. Transcription coactivator peroxisome proliferator-activated receptor-binding protein/mediator 1 deficiency abrogates acetaminophen hepatotoxicity. Proc. Natl. Acad. Sci. USA 102: 12531-12536.
2. Surapureddi, S., et al. 2008. Nuclear receptor coactivator 6 mediates the synergistic activation of human cytochrome P-450 2C9 by the constitutive androstane receptor and hepatic nuclear factor-4α. Mol. Pharmacol. 74: 913-923.
3. Osabe, M., et al. 2008. Expression of hepatic UDP-glucuronosyltransferase 1A1 and 1A6 correlated with increased expression of the nuclear constitutive androstane receptor and peroxisome proliferator-activated receptor α in male rats fed a high-fat and high-sucrose diet. Drug Metab. Dispos. 36: 294-302.
4. Hernandez, J.P., et al. 2009. Sexually dimorphic regulation and induction of P450s by the constitutive androstane receptor (CAR). Toxicology 256: 53-64.
5. Xie, Y.B., et al. 2009. Molecular characterization of SMILE as a novel corepressor of nuclear receptors. Nucleic Acids Res. 37: 4100-4115.
6. Pakharukova, M., et al. 2010. The increased CAR-dependent metabolism of thyroid hormones in mice with high cancer susceptibility. Life Sci. 87: 439-444.
7. Sugatani, J., et al. 2010. Induction of UGT1A1 and CYP2B6 by an antimitogenic factor in HepG2 cells is mediated through suppression of cyclin-dependent kinase 2 activity: cell cycle-dependent expression. Drug Metab. Dispos. 38: 177-186.
8. Renga, B., et al. 2011. Farnesoid X receptor suppresses constitutive androstane receptor activity at the multidrug resistance protein-4 promoter. Biochim. Biophys. Acta 1809: 157-165.
9. Fei, Z., et al. 2011. Ankrd26 gene disruption enhances adipogenesis of mouse embryonic fibroblasts. J. Biol. Chem. 286: 27761-27768.