

CAR (N-17): sc-10313

BACKGROUND

The coxsackie and adenovirus receptor (CAR) mediates viral infection by the binding of various adenoviruses through specific protein interactions. There is a high affinity between the viral knob domain and the extracellular amino terminal domain, designated D1, of CAR. The D1 domain alone is sufficient for knob binding in transfected cells. Determining the specific interactions between CAR and adenoviruses is imperative in order to further develop gene therapy using viral hosts. CAR is expressed in many human and murine cell types. However, cells that express CAR at low levels are not efficiently infected by adenoviruses. Possible methods of avoiding this problem in certain cell types are by either supplementing CAR or modifying the Ad knob to bind to other receptors.

CHROMOSOMAL LOCATION

Genetic locus: CXADR (human) mapping to 21q21.1; Cxadr (mouse) mapping to 16 C3.1.

SOURCE

CAR (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of CAR of human 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-10313 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.

APPLICATIONS

CAR (N-17) is recommended for detection of CAR of mouse, rat and 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).

CAR (N-17) is also recommended for detection of CAR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CAR siRNA (h): sc-29906, CAR siRNA (m): sc-39919, CAR shRNA Plasmid (h): sc-29906-SH, CAR shRNA Plasmid (m): sc-39919-SH, CAR shRNA (h) Lentiviral Particles: sc-29906-V and CAR shRNA (m) Lentiviral Particles: sc-39919-V.

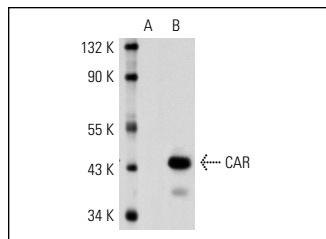
Molecular Weight of CAR: 46 kDa.

Positive Controls: mouse brain extract: sc-2253, HeLa whole cell lysate: sc-2200 or CAR (h2): 293 Lysate: sc-112300.

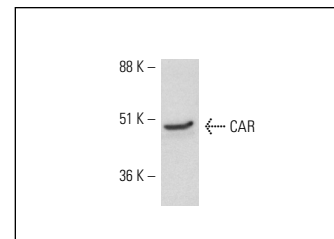
RECOMMENDED SECONDARY REAGENTS

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



CAR (N-17): sc-10313. Western blot analysis of CAR expression in non-transfected: sc-110760 (A) and human CAR transfected: sc-112300 (B) 293 whole cell lysates.



CAR (N-17): sc-10313. Western blot analysis of CAR expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

- Wang, C.Q., et al. 2007. Coxsackie and adenovirus receptor (CAR) is a product of Sertoli and germ cells in rat testes which is localized at the Sertoli-Sertoli and Sertoli-germ cell interface. *Exp. Cell Res.* 313: 1373-1392.
- Ahn, J., et al. 2008. Primary neurons become less susceptible to coxsackievirus B5 following maturation: the correlation with the decreased level of CAR expression on cell surface. *J. Med. Virol.* 80: 434-440.
- Vigl, B., et al. 2009. Coxsackie- and adenovirus receptor (CAR) is expressed in lymphatic vessels in human skin and affects lymphatic endothelial cell function *in vitro*. *Exp. Cell Res.* 315: 336-347.
- Grellier, E., et al. 2011. A fiber-modified adenoviral vector interacts with immunoevasion molecules of the B7 family at the surface of murine leukemia cells derived from dormant tumors. *Mol. Cancer* 10: 105.

RESEARCH USE

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

MONOS
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Try **CAR (E-1): sc-373791** or **CAR (A-10): sc-365836**, our highly recommended monoclonal alternatives to CAR (N-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CAR (E-1): sc-373791**.