SANTA CRUZ BIOTECHNOLOGY, INC.

CAR (E-1): sc-373791

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (E-1) is a mouse monoclonal antibody raised against amino acids 1-300 of CAR of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CAR (E-1) is available conjugated to agarose (sc-373791 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373791 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373791 PE), fluorescein (sc-373791 FITC), Alexa Fluor® 488 (sc-373791 AF488), Alexa Fluor® 546 (sc-373791 AF546), Alexa Fluor® 594 (sc-373791 AF594) or Alexa Fluor® 647 (sc-373791 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373791 AF680) or Alexa Fluor® 790 (sc-373791 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CAR (E-1) is recommended for detection of CAR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

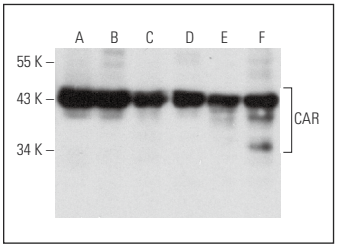
Molecular Weight of CAR: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or CAR (h): 293T Lysate: sc-159755.

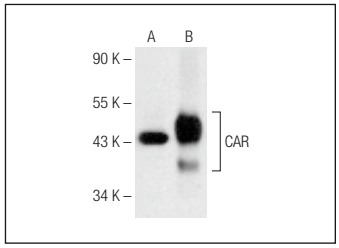
STORAGE

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

DATA



CAR (E-1): sc-373791. Western blot analysis of CAR expression in Jurkat (**A**), HeLa (**B**), F9 (**C**), Neuro-2A (**D**), C6 (**E**) and RIN-m5F (**F**) whole cell lysates.



CAR (E-1): sc-373791. Western blot analysis of CAR expression in non-transfected: sc-117752 (**A**) and human CAR transfected: sc-159755 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, J., et al. 2017. ERK1/2 pathway regulates coxsackie and adenovirus receptor expression in mouse cardiac stem cells. Exp. Ther. Med. 13: 3348-3354.
2. Kirschen, G.W., et al. 2018. Genetic dissection of the neuro-glio-vascular machinery in the adult brain. Mol. Brain 11: 2.
3. Bhagyaraj, E., et al. 2019. TGF-β induced chemoresistance in liver cancer is modulated by xenobiotic nuclear receptor PXR. Cell Cycle 18: 3589-3602.
4. Chung, J., et al. 2019. Coxsackievirus and adenovirus receptor mediates the responses of endothelial cells to fluid shear stress. Exp. Mol. Med. 51: 144.
5. Li, L., et al. 2020. Endogenously produced LG3/4/5-peptide protects testes against toxicant-induced injury. Cell Death Dis. 11: 436.
6. Dai, W., et al. 2020. ZO-1 regulates intercalated disc composition and ztrioventricular node conduction. Circ. Res. 127: e28-e43.
7. Wang, H., et al. 2021. Colorectal cancer stem cell states uncovered by simultaneous single-cell analysis of transcriptome and telomeres. Adv. Sci. 8: 2004320.
8. Wang, Q., et al. 2024. Selection-free precise gene repair using high-capacity adenovector delivery of advanced prime editing systems rescues dystrophin synthesis in DMD muscle cells. Nucleic Acids Res. 52: 2740-2757.

PROTOCOLS

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