SANTA CRUZ BIOTECHNOLOGY, INC.

CAR (Mab.E[mh] 1): sc-32795

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 (Mab.E[mh] 1) is a mouse monoclonal antibody raised against recombinant CAR of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CAR (Mab.E[mh] 1) is available conjugated to agarose (sc-32795 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32795 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32795 PE), fluorescein (sc-32795 FITC), Alexa Fluor® 488 (sc-32795 AF488), Alexa Fluor® 546 (sc-32795 AF546), Alexa Fluor® 594 (sc-32795 AF594) or Alexa Fluor® 647 (sc-32795 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32795 AF680) or Alexa Fluor® 790 (sc-32795 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

CAR (Mab.E[mh] 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

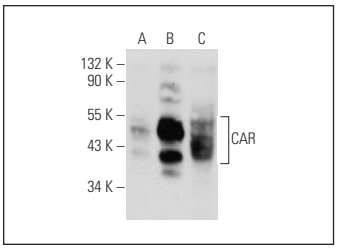
Molecular Weight of CAR: 46 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, CAR (h): 293T Lysate: sc-159755 or HeLa whole cell lysate: sc-2200.

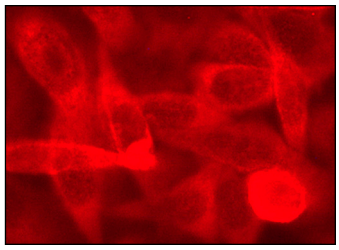
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CAR (Mab.E[mh] 1): sc-32795. Western blot analysis of CAR expression in non-transfected 293T: sc-117752 (**A**), human CAR transfected 293T: sc-159755 (**B**) and Hep G2 (**C**) whole cell lysates.



CAR (Mab.E[mh] 1) Alexa Fluor® 594: sc-32795 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. 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.
2. Li, P., et al. 2010. Use of adenoviral vectors to target chemotherapy to tumor vascular endothelial cells suppresses growth of breast cancer and melanoma. Mol. Ther. 18: 921-928.
3. Khare, S., et al. 2014. The PYRIN domain-only protein POP3 inhibits ALR inflammasomes and regulates responses to infection with DNA viruses. Nat. Immunol. 15: 343-353.
4. Rais, Y., et al. 2015. The growth plate's response to load is partially mediated by mechano-sensing via the chondrocytic primary cilium. Cell. Mol. Life Sci. 72: 597-615.

RESEARCH USE

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

PROTOCOLS

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