

CD40 (H-120): sc-9096

BACKGROUND

Resting B cells can be activated and clonally expanded into antibody-producing cells in response to a combination of cell contact and soluble signals provided by primed helper T (Th) cells. While cytokines IL-4 and IL-13 alone are inadequate for B cell activation, contact with Th cells seems to be sufficient for delivery of proliferative signals. A receptor ligand pair central to the transmission of this signal is CD40, expressed on the surface of B cells, together with CD40L, expressed on activated T cells. In the presence of such stimulus, IL-4 and IL-13 are capable of triggering immunoglobulin class switching and secretion of IgE. B cells are sensitive to these cytokines only subsequent to CD40/CD40L-driven DNA synthesis. A downstream mediator of the CD40 signaling pathway, designated CRAF, is a member of an expanding family of proteins that contain a conserved cysteine- and histidine-rich RING finger motif. Other members of the family include TRAF1 and TRAF2. The latter proteins have been shown to regulate TNF-R2 as well as CD40 signaling through activation of the NF κ B family of transcription factors.

CHROMOSOMAL LOCATION

Genetic locus: CD40 (human) mapping to 20q13.12; Cd40 (mouse) mapping to 2 H3.

SOURCE

CD40 (H-120) is a rabbit polyclonal antibody raised against amino acids 74-193 of CD40 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD40 (H-120) is recommended for detection of CD40 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CD40 siRNA (h): sc-29250, CD40 siRNA (m): sc-29998, CD40 shRNA Plasmid (h): sc-29250-SH, CD40 shRNA Plasmid (m): sc-29998-SH, CD40 shRNA (h) Lentiviral Particles: sc-29250-V and CD40 shRNA (m) Lentiviral Particles: sc-29998-V.

Molecular Weight of CD40: 43 kDa.

Positive Controls: CD40 (h): 293 Lysate: sc-112948, A-431 whole cell lysate: sc-2201 or Ramos cell lysate: sc-2216.

RESEARCH USE

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

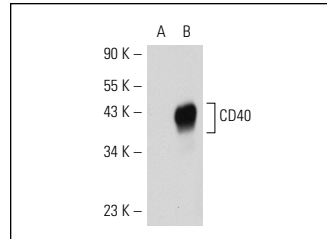
PROTOCOLS

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

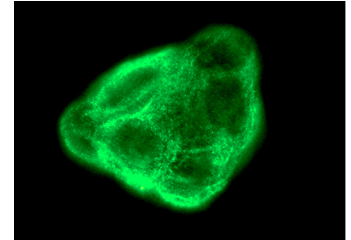
STORAGE

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

DATA



CD40 (H-120): sc-9096. Western blot analysis of CD40 expression in non-transfected: sc-110760 (A) and human CD40 transfected: sc-112948 (B) 293 whole cell lysates.



CD40 (H-120): sc-9096. Immunofluorescence staining of methanol-fixed A-431 cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Puig-Kroger, A., et al. 2003. RUNX/AML and C/EBP factors regulate CD11 α integrin expression in myeloid cells through overlapping regulatory elements. *Blood* 102: 3252-3261.
- Puig-Kroger, A., et al. 2006. RUNX3 negatively regulates CD36 expression in myeloid cell lines. *J. Immunol.* 177: 2107-2114.
- Janoshazi, A., et al. 2007. Modified receptor internalization upon coexpression of 5-HT1B receptor and 5-HT2B receptors. *Mol. Pharmacol.* 71: 1463-1474.
- Hu, Q., et al. 2008. Peroxisome proliferator-activated receptor- γ 1 gene therapy attenuates atherosclerosis and stabilizes plaques in apolipoprotein E-deficient mice. *Hum. Gene Ther.* 19: 287-299.
- Graham, J.P., et al. 2009. Roles of the TRAF2/3 binding site in differential B cell signaling by CD40 and its viral oncogenic mimic, LMP1. *J. Immunol.* 183: 2966-2973.
- Lanzi, G., et al. 2010. Different molecular behavior of CD40 mutants causing hyper-IgM syndrome. *Blood* 116: 5867-5874.
- Hostager, B.S., et al. 2010. HOIL-1L interacting protein (HOIP) as an NF κ B regulating component of the CD40 signaling complex. *PLoS ONE* 5: e11380.
- Knox, P.G., et al. 2011. The death domain kinase RIP1 links the immunoregulatory CD40 receptor to apoptotic signaling in carcinomas. *J. Cell Biol.* 192: 391-399.



Try **CD40 (H-10): sc-13128** or **CD40 (HM40-3): sc-20010**, our highly recommended monoclonal alternatives to CD40 (H-120). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CD40 (H-10): sc-13128**.