CD40 (HM40-3): sc-20010

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 NFκB family of transcription factors.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: C4d0 (mouse) mapping to 2 H3.

SOURCE

CD40 (HM40-3) is a Armenian hamster monoclonal antibody raised against (BALB/c x NZB) F1 mouse-derived lymphoma WEHI-231 cells.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking of ligand binding and stimulation of B lymphocytes, sc-20010 L, 200 µg/0.1 ml.

APPLICATIONS

CD40 (HM40-3) is recommended for detection of CD40 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD40 siRNA (m): sc-29998, CD40 shRNA Plasmid (m): sc-29998-SH and CD40 shRNA (m) Lentiviral Particles: sc-29998-V.

Molecular Weight of CD40: 43 kDa.
Positive Controls: mouse peripheral blood lymphocyte.

DATA

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

SELECT PRODUCT CITATIONS


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.

PROTOCOLS

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