SANTA CRUZ BIOTECHNOLOGY, INC.

Ox40 (H-10): sc-376014

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ox40 (also designated CD134 and Ox40R), is a member of the tumor necrosis factor receptor (TNFR) family. Ox40 is involved in coordinating CD4 T cell selection, migration and cytokine differentiation in T helper (Th)1 and Th2 cells. Ox40 is also involved in the stimulation of T cells, T cell-dependent humoral response and generation of optimal $CD4^+$ T cell responses *in vivo* and *in vitro*. Ox40 is expressed on activated $CD4^+$ T lymphocytes and its ligand, Ox40L, is found preferentially on activated B cells. Engagement of Ox40 with its ligand, Ox40L, delivers a strong costimulatory signal to effector T cells. Members of the TNFR superfamily are critically involved in the regulation of infections, inflammation, autoimmune diseases and tissue homeostasis.

REFERENCES

1. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation, and death. Cell 76: 959-962.
2. Chen, A.I., et al. 1999. Ox40-ligand has a critical costimulatory role in dendritic cell:T cell interactions. Immunity 11: 689-698.
3. Kopf, M., et al. 1999. Ox40-deficient mice are defective in Th cell proliferation but are competent in generating B cell and CTL responses after virus infection. Immunity 11: 699-708.
4. Weinberg, A.D., et al. 2000. Engagement of the Ox40 receptor *in vivo* enhances antitumor immunity. J. Immunol. 164: 2160-2169.
5. Morimoto, S., et al. 2000. CD134L engagement enhances human B cell Ig production: CD154/CD40, CD70/CD27, and CD134/CD134L interactions coordinately regulate T cell-dependent B cell responses. J. Immunol. 164: 4097-4104.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF4 (human) mapping to 1p36.33.

SOURCE

Ox40 (H-10) is a mouse monoclonal antibody raised against amino acids 145-277 of Ox40 of human origin.

PRODUCT

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

Ox40 (H-10) is available conjugated to agarose (sc-376014 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376014 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376014 PE), fluorescein (sc-376014 FITC), Alexa Fluor® 488 (sc-376014 AF488), Alexa Fluor® 546 (sc-376014 AF546), Alexa Fluor® 594 (sc-376014 AF594) or Alexa Fluor® 647 (sc-376014 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376014 AF680) or Alexa Fluor® 790 (sc-376014 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

Ox40 (H-10) is recommended for detection of Ox40 of 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), immunohistochemistry (including paraffin-embedded sections) (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 Ox40 siRNA (h): sc-42822, Ox40 shRNA Plasmid (h): sc-42822-SH and Ox40 shRNA (h) Lentiviral Particles: sc-42822-V.

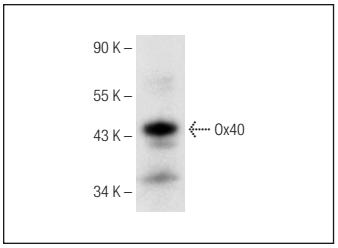
Molecular Weight of Ox40: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, U-937 cell lysate: sc-2239 or HuT 78 whole cell lysate: sc-2208.

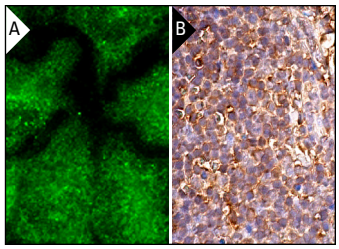
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ox40 (H-10): sc-376014. Western blot analysis of Ox40 expression in HuT 78 whole cell lysate.



Ox40 (H-10): sc-376014. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal and non-germinal centers (**B**).

SELECT PRODUCT CITATIONS

1. Ludwig, S., et al. 2018. Molecular and functional profiles of exosomes from HPV^+ and HPV^- head and neck cancer cell lines. Front. Oncol. 8: 445.

STORAGE

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