SANTA CRUZ BIOTECHNOLOGY, INC.

CTLA-4 (H-126): sc-9094

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

T cell proliferation and lymphokine production are triggered by occupation of the TCR by antigen, followed by a costimulatory signal that is delivered by a ligand expressed on antigen presenting cells. The B7-related cell surface proteins CD80 (B7-1) and CD86 (B7-2) are expressed on antigen presenting cells, bind the homologous T cell receptors CD28 and CTLA-4 (cytotoxic T lymphocyte-associated protein-4) and trigger costimulatory signals for optimal T cell activation. CTLA-4 shares 31% overall amino acid identity with CD28 and it has been proposed that CD28 and CTLA-4 are functionally redundant. SLAM is a novel receptor on T cells that, when engaged, potentiates T cell expansion in a CD28-independent manner. B7, also designated BB1, is another ligand or counterreceptor for CD28 and CTLA-4 that is expressed on the antigen-presenting cell.

CHROMOSOMAL LOCATION

Genetic locus: CTLA4 (human) mapping to 2q33.2; Ctla4 (mouse) mapping to 1 C2.

SOURCE

CTLA-4 (H-126) is a rabbit polyclonal antibody raised against amino acids 36-161 of CTLA-4 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

CTLA-4 (H-126) is recommended for detection of CTLA-4 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CTLA-4 (H-126) is also recommended for detection of CTLA-4 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CTLA-4 siRNA (h): sc-42766, CTLA-4 siRNA (m): sc-42767, CTLA-4 shRNA Plasmid (h): sc-42766-SH, CTLA-4 shRNA Plasmid (m): sc-42767-SH, CTLA-4 shRNA (h) Lentiviral Particles: sc-42766-V and CTLA-4 shRNA (m) Lentiviral Particles: sc-42767-V.

Molecular Weight of CTLA-4 cytosolic and membrane forms: 34/30 kDa.

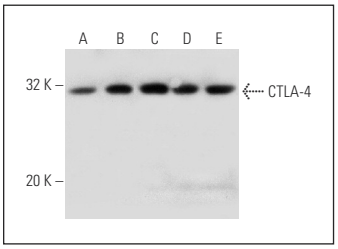
Molecular Weight of glycosylated CTLA-4: 41-43 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, ALL-SIL whole cell lysate: sc-364356 or U-698-M whole cell lysate: sc-364799.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CTLA-4 (H-126): sc-9094. Western blot analysis of CTLA-4 expression in Jurkat (**A**), ALL-S1L (**B**), U-698-M (**C**), U266 (**D**) and CCRF-CEM (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Djilali-Saiah, I., et al. 2002. DNA vaccination breaks tolerance for a neo-self antigen in liver: a transgenic murine model of autoimmune hepatitis. J. Immunol. 169: 4889-4896.
2. Bolstad, A.I., et al. 2003. Increased salivary gland tissue expression of Fas, Fas ligand, cytotoxic T lymphocyte-associated antigen 4, and programmed cell death 1 in primary Sjogren's syndrome. Arthritis Rheum. 48: 174-185.
3. McCabe, N., et al. 2006. Deficiency in the repair of DNA damage by homologous recombination and sensitivity to poly(ADP-ribose) polymerase inhibition. Cancer Res. 66: 8109-8115.
4. Koguchi, Y., et al. 2007. Preformed CD40 ligand exists in secretory lysosomes in effector and memory $CD4^+$ T cells and is quickly expressed on the cell surface in an antigen-specific manner. Blood 110: 2520-2527.
5. Kim, J.S., et al. 2012. Generation and evaluation of the efficacy of rhesus monkey soluble cytotoxic T lymphocyte-associated antigen-4 in the allogeneic mixed lymphocyte reaction. Biotechnol. Lett. 34: 2191-2197.
6. Cao, C., et al. 2013. Impairment of TrkB-PSD-95 signaling in Angelman syndrome. PLoS Biol. 11: e1001478.

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.