

CD28 (C-20): sc-1623

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: CD28 (human) mapping to 2q33.2; Cd28 (mouse) mapping to 1 C2.

SOURCE

CD28 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD28 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.

Blocking peptide available for competition studies, sc-1623 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD28 (C-20) is recommended for detection of CD28 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).

CD28 (C-20) is also recommended for detection of CD28 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CD28 siRNA (h): sc-29983, CD28 siRNA (m): sc-29982, CD28 shRNA Plasmid (h): sc-29983-SH, CD28 shRNA Plasmid (m): sc-29982-SH, CD28 shRNA (h) Lentiviral Particles: sc-29983-V and CD28 shRNA (m) Lentiviral Particles: sc-29982-V.

Molecular Weight of CD28 monomer: 44 kDa.

Molecular Weight of CD28 homodimer: 90 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

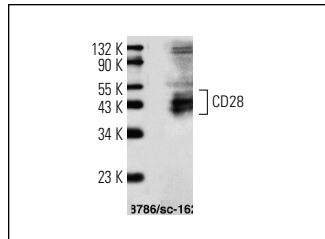
STORAGE

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.

DATA



CD28 (C-20): sc-1623. Western blot analysis of CD28 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Woerly, G., et al. 1999. Expression of CD28 and CD86 by human eosinophils and role in the secretion of type 1 cytokines (interleukin 2 and interferon γ): inhibition by immunoglobulin α complexes. *J. Exp. Med.* 190: 487-495.
2. Hanawa, H., et al. 2002. A novel costimulatory signaling in human T lymphocytes by a splice variant of CD28. *Blood* 99: 2138-2145.
3. Alisi, A., et al. 2003. Treatment with EGF increases the length of S-Phase after partial hepatectomy in rat, changing the activities of Cdk. *Cell. Physiol. Biochem.* 13: 239-248.
4. Mikolajczak, S.A., et al. 2004. The modulation of CD40 ligand signaling by transmembrane CD28 splice variant in human T cells. *J. Exp. Med.* 199: 1025-1031.
5. Alisi, A., et al. 2005. Thyroid status affects rat liver regeneration after partial hepatectomy by regulating cell cycle and apoptosis. *Cell. Physiol. Biochem.* 15: 69-76.
6. Gaibelet, G., et al. 2006. CD4 and CCR5 constitutively interact at the plasma membrane of living cells: a confocal fluorescence resonance energy transfer-based approach. *J. Biol. Chem.* 281: 37921-37929.
7. Leoni, S., et al. 2008. Cell-cycle protein modifications in the kidney of *Mus spretus* from Doñana National Park. *Environ. Toxicol.* 23: 44.

PROTOCOLS

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