SANTA CRUZ BIOTECHNOLOGY, INC.

CD6 (H-300): sc-20921

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD6 is a type I transmembrane glycoprotein that is present on mature thymocytes, peripheral T cells and a subset of B cells. The CD6 glycoprotein is tyrosine phosphorylated during TCR-mediated T cell activation and the size difference between the CD6 forms is due in part to differences in phosphorylation state. CD6 protein contains a 24 amino acid signal sequence, 3 extracellular "scavenger receptor cysteine-rich" (SRCR) domains, a membrane-spanning domain and a 44 amino acid cytoplasmic domain. CD6 shows significant homology to CD5. CD6, which is also found in brain and B cell chronic lymphocytic leukemias, plays an important role in interactions of thymocytes with thymic epithelial cells. CD6 molecules can physically associate with the TCR/CD3 complex.

REFERENCES

1. Bazil, V., et al. 1989. Monoclonal antibodies against human leucocyte antigens. III. Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. Folia Biol. 35: 289-297.
2. Swack, J.A., et al. C.E. 1991. Biosynthesis and posttranslational modification of CD6, a T cell signal-transducing molecule. J. Biol. Chem. 266: 7137-7143.
3. Aruffo, A., et al. 1991. The lymphocyte glycoprotein CD6 contains a repeated domain structure characteristic of a new family of cell surface and secreted proteins. J. Exp. Med. 174: 949-952.
4. Singer, N.G., et al. 1996. Role of the CD6 glycoprotein in antigen-specific and autoreactive responses of cloned human T lymphocytes. Immunology 88: 537-543.
5. Gimferrer, I., et al. 2003. The accessory molecules CD5 and CD6 associate on the membrane of lymphoid T cells. J. Biol. Chem. 278: 8564-8571.

CHROMOSOMAL LOCATION

Genetic locus: CD6 (human) mapping to 11q12.2; Cd6 (mouse) mapping to 19 A.

SOURCE

CD6 (H-300) is a rabbit polyclonal antibody raised against amino acids 369-668 of CD6 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.

PROTOCOLS

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

APPLICATIONS

CCD6 (H-300) is recommended for detection of CD6 of human and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD6 siRNA (h): sc-35015, CD6 siRNA (m): sc-35016, CD6 shRNA Plasmid (h): sc-35015-SH, CD6 shRNA Plasmid (m): sc-35016-SH, CD6 shRNA (h) Lentiviral Particles: sc-35015-V and CD6 shRNA (m) Lentiviral Particles: sc-35016-V.

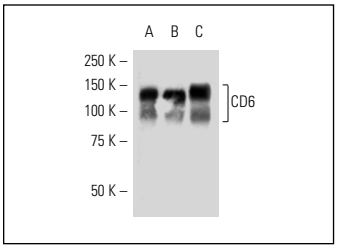
Molecular Weight of CD6: 90-130 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, CD6 (h): 293T Lysate: sc-115124 or Jurkat whole cell lysate: sc-2204.

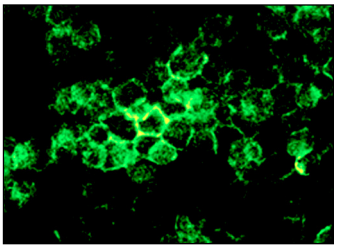
RECOMMENDED SECONDARY REAGENTS

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



CD6 (H-300): sc-20921. Western blot analysis of CD6 expression in CCRF-CEM (**A**), Jurkat (**B**) and MOLT-4 (**C**) whole cell lysates.



CD6 (H-300): sc-20921. Immunofluorescence staining of methanol-fixed Jurkat cells showing membrane localization.

RESEARCH USE

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