

CD6 (SPV-L14): sc-7320



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, three 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. 1991. Biosynthesis and post-translational 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. Castro, M.A., et al. 2003. OX52 is the rat homologue of CD6: evidence for an effector function in the regulation of CD5 phosphorylation. *J. Leuk. Biol.* 73: 183-190.

CHROMOSOMAL LOCATION

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

SOURCE

CD6 (SPV-L14) is a mouse monoclonal antibody raised against a CD8⁺ cytotoxic T-cell clone.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD6 (SPV-L14) is available conjugated to agarose (sc-7320 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7320 PE), fluorescein (sc-7320 FITC), Alexa Fluor® 488 (sc-7320 AF488), Alexa Fluor® 546 (sc-7320 AF546), Alexa Fluor® 594 (sc-7320 AF594) or Alexa Fluor® 647 (sc-7320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7320 AF680) or Alexa Fluor® 790 (sc-7320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD6 (SPV-L14) is recommended for detection of CD6 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 flow cytometry (1 µg per 1 x 10⁶ cells).

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 glycosylation: 90-130 kDa.

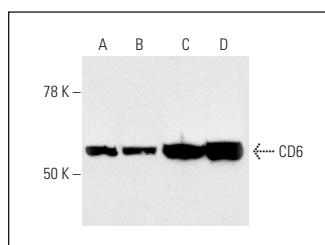
Positive Controls: BJAB whole cell lysate: sc-2207, Ramos cell lysate: sc-2216 or MOLT-4 cell lysate: sc-2233.

RECOMMENDED SUPPORT REAGENTS

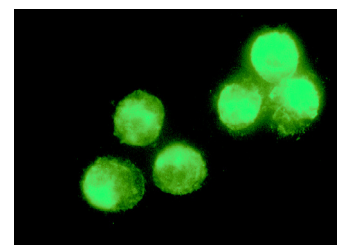
To ensure optimal results, the following support reagents are recommended:

- 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.

DATA



CD6 (SPV-L14): sc-7320. Western blot analysis of CD6 expression in BJAB (A), Ramos (B), MOLT-4 (C) and CTLL-2 (D) whole cell lysates.



CD6 (SPV-L14): sc-7320. Immunofluorescence staining of methanol-fixed Ramos cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Zhao, L., et al. 2005. Expression of the Leo1-like domain of replicative senescence down-regulated Leo1-like (RDL) protein promotes senescence of 2BS fibroblasts. *FASEB J.* 19: 521-532.

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.