

# CD6 (UMCD6/3F7B5): sc-65249

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CD6 (human) mapping to 11q12.2.

## SOURCE

CD6 (UMCD6/3F7B5) is a mouse monoclonal antibody raised against rheumatoid synovial T cell line ST-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CD6 (UMCD6/3F7B5) is recommended for detection of CD6 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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

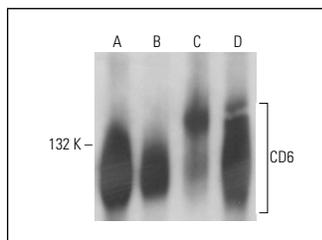
Molecular Weight of CD6: 90-130 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, MOLT-4 cell lysate: sc-2233 or Jurkat + PMA cell lysate: sc-24718.

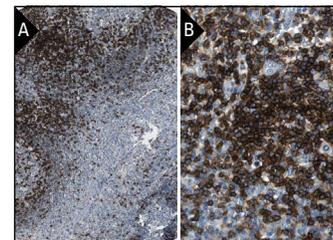
## RECOMMENDED SUPPORT REAGENTS

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



CD6 (UMCD6/3F7B5): sc-65249. Western blot analysis of CD6 expression in human PBL (A), PMA treated human PBL (B), PMA treated Jurkat (C) and CCRF-CEM (D) whole cell lysates under non-reducing conditions.



CD6 (UMCD6/3F7B5): sc-65249. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of lymphoid cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

1. Van de Laar, E., et al. 2014. Cell surface marker profiling of human tracheal basal cells reveals distinct subpopulations, identifies MST1/MSP as a mitogenic signal, and identifies new biomarkers for lung squamous cell carcinomas. *Respir. Res.* 15: 160.
2. Kureel, A.K., et al. 2019. Identification of a novel transcript variant of the human CD6 gene that lacks exon 9. *Immunobiology* 224: 666-671.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.