

CD53 (D-20): sc-25213

BACKGROUND

The CD53 antigen is a member of the tetraspanin membrane protein family that is expressed in the lymphoid-myeloid lineage. The tetraspanin superfamily (CD9, CD37, CD53, CD63, CD81 and CD82) comprises a group of cell-surface proteins that are involved in cell activation and signal transduction as well as in cell adhesion, motility and metastasis. Tetraspanin transmembrane proteins have a metastasis suppressor effect by acting as cell motility brakes in tumor cells. Human neutrophils express high levels of CD53, an N-glycosylated pan-leukocyte antigen and the true homolog of the rat MRC-OX-44 antigen. CD53 is expressed on B cells, monocytes, macrophages, neutrophils, single (CD4 or CD8) positive thymocytes and peripheral T cells.

REFERENCES

1. Angelisova, P., et al. 1990. The human leucocyte surface antigen CD53 is a protein structurally similar to the CD37 and MRC OX-44 antigens. *Immunogenetics* 32: 281-285.
2. Online Mendelian Inheritance in Man, OMIM™. 1994. Johns Hopkins University, Baltimore, MD. MIM Number: 151525. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Okochi, H., et al. 1997. Expression of tetra-spans transmembrane family (CD9, CD37, CD53, CD63, CD81 and CD82) in normal and neoplastic human keratinocytes: an association of CD9 with α 3 β 1 integrin. *Br. J. Dermatol.* 137: 856-863.
4. Mollinedo, F., et al. 1998. Physiological activation of human neutrophils down-regulates CD53 cell surface antigen. *J. Leukoc. Biol.* 63: 699-706.
5. Beinert, T., et al. 2000. Increased expression of the tetraspanins CD53 and CD63 on apoptotic human neutrophils. *J. Leukoc. Biol.* 67: 369-373.
6. Yunta, M., et al. 2002. Transient activation of the c-Jun N-terminal kinase (JNK) activity by ligation of the tetraspan CD53 antigen in different cell types. *Eur. J. Biochem.* 269: 1012-1021.

CHROMOSOMAL LOCATION

Genetic locus: CD53 (human) mapping to 1p13.3; Cd53 (mouse) mapping to 3 F2.3.

SOURCE

CD53 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CD53 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-25213 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CD53 (D-20) is recommended for detection of CD53 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CD53 siRNA (h): sc-42796, CD53 siRNA (m): sc-42797, CD53 shRNA Plasmid (h): sc-42796-SH, CD53 shRNA Plasmid (m): sc-42797-SH, CD53 shRNA (h) Lentiviral Particles: sc-42796-V and CD53 shRNA (m) Lentiviral Particles: sc-42797-V.

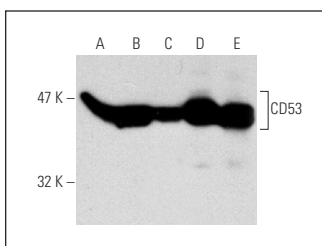
Molecular Weight of CD53: 32-45 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, MCP-5 whole cell lysate or CD53 (m): 293T Lysate: sc-119110.

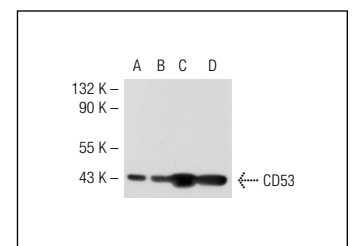
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD53 (D-20): sc-25213. Western blot analysis of CD53 expression in WEHI-231 (A), MCP-5 (B), WR19L (C) and mouse PBL (D) whole cell lysates and mouse spleen tissue extract (E).



CD53 (D-20): sc-25213. Western blot analysis of CD53 expression in non-transfected 293T: sc-117752 (A), mouse CD53 transfected 293T: sc-119110 (B), mouse PBL (C) and human PBL (D) whole cell lysates.

RESEARCH USE

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

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Try **CD53 (B-12): sc-390185** or **CD53 (OX44): sc-53055**, our highly recommended monoclonal alternatives to CD53 (D-20).