

CD53 (S-20): sc-25210

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. 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. 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.
3. Olweus, J., et al. 1993. CD53, a protein with four membrane-spanning domains, mediates signal transduction in human monocytes and B cells. *J. Immunol.* 151: 707-716.
4. Rasmussen, A.M., et al. 1994. Cross-linking of CD53 promotes activation of resting human B lymphocytes. *J. Immunol.* 153: 4997-5007.
5. 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 $\alpha 3\beta 1$ integrin. *Br. J. Dermatol.* 137: 856-863.

CHROMOSOMAL LOCATION

Genetic locus: CD53 (human) mapping to 1p13.3.

SOURCE

CD53 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CD53 of human 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-25210 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.

RESEARCH USE

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

APPLICATIONS

CD53 (S-20) is recommended for detection of CD53 of 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).

CD53 (S-20) is also recommended for detection of CD53 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for CD53 siRNA (h): sc-42796, CD53 shRNA Plasmid (h): sc-42796-SH and CD53 shRNA (h) Lentiviral Particles: sc-42796-V.

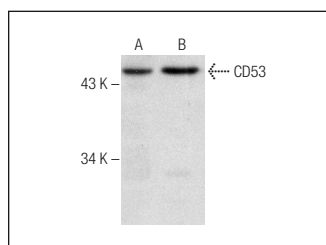
Molecular Weight of CD53: 32-45 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or AML-193 whole cell lysate: sc-364182.

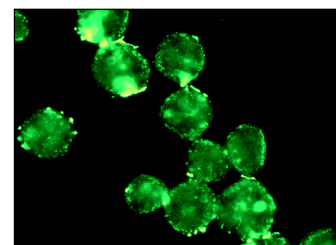
RECOMMENDED SECONDARY REAGENTS

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 (S-20): sc-25210. Western blot analysis of CD53 expression in Jurkat (A) and AML-193 (B) whole cell lysates.



CD53 (S-20): sc-25210. Immunofluorescence staining of methanol-fixed Ramos cells showing membrane localization.

PROTOCOLS

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