

# CD59 (B-3): sc-133171

## BACKGROUND

CD59 is a GPI-anchored glycoprotein that is expressed on leukocytes, vascular endothelial cells, various epithelial cells and placenta. CD59 acts together with CD58 in mediating T cell adhesion and activation, and it may be a second ligand of CD2. CD59 functions as a regulator of the terminal pathway of complement by binding to the C8/C9 components of the assembling membrane attack complex (MAC) on host cell membranes, to stop the formation of the lytic pore. CD59 also drives both calcium release and activation of lipid-raft associated signalling molecules such as tyrosine kinases. CD59 gene has two p53-responsive domains that may be implicated in the defense of host cells from damage by the complement system in inflammation, suggesting that p53 could be used to mediate susceptibility of tumor cells to the complement lysis during chemotherapy.

## REFERENCES

1. Landi, A.P., et al. 2003. Determination of CD59 protein in normal human serum by enzyme immunoassay, using octyl glucoside detergent to release glycosyl-phosphatidylinositol-CD59 from lipid complex. *Immunol. Lett.* 90: 209-213.
2. Qin, X., et al. 2004. Glycation inactivation of the complement regulatory protein CD59: a possible role in the pathogenesis of the vascular complications of human diabetes. *Diabetes* 53: 2653-2661.
3. Giddings, K.S., et al. 2004. Human CD59 is a receptor for the cholesterol-dependent cytolysin intermedilysin. *Nat. Struct. Mol. Biol.* 11: 1173-1178.

## CHROMOSOMAL LOCATION

Genetic locus: CD59 (human) mapping to 11p13.

## SOURCE

CD59 (B-3) is a mouse monoclonal antibody raised against amino acids 26-110 mapping within an internal region of CD59 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CD59 (B-3) is recommended for detection of CD59 of human origin by Western Blotting (starting dilution 1:100, 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 CD59 siRNA (h): sc-37249, CD59 shRNA Plasmid (h): sc-37249-SH and CD59 shRNA (h) Lentiviral Particles: sc-37249-V.

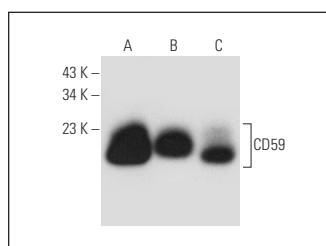
Molecular Weight of CD59: 20 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, Caki-1 cell lysate: sc-2224 or BJAB whole cell lysate: sc-2207.

## 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



CD59 (B-3): sc-133171. Western blot analysis of CD59 expression in ES-2 (A), Caki-1 (B) and BJAB (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Ejaz, A., et al. 2012. Specific acquisition of functional CD59 but not CD46 or CD55 by hepatitis C virus. *PLoS ONE* 7: e45770.
2. Li, B., et al. 2013. CD59 is overexpressed in human lung cancer and regulates apoptosis of human lung cancer cells. *Int. J. Oncol.* 43: 850-858.
3. Shang, Y., et al. 2014. Systematic immunohistochemical analysis of the expression of CD46, CD55, and CD59 in colon cancer. *Arch. Pathol. Lab. Med.* 138: 910-919.
4. Staubach, S., et al. 2017. Classical galactosemia: insight into molecular pathomechanisms by differential membrane proteomics of fibroblasts under galactose stress. *J. Proteome Res.* 16: 516-527.
5. Olcina, M.M., et al. 2018. Mutations in an innate immunity pathway are associated with poor overall survival outcomes and hypoxic signaling in cancer. *Cell Rep.* 25: 3721-3732.

## 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.