

# CD59 (R-79): sc-9157

## 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. Storstein, A., et al. 2004. Heterogeneous expression of CD59 on human Purkinje cells. *Neurosci. Lett.* 362: 21-25.
3. Lin, F., et al. 2004. Respective roles of decay-accelerating factor and CD59 in circumventing glomerular injury in acute nephrotoxic serum nephritis. *J. Immunol.* 172: 2636-2642.
4. Yamada, K., et al. 2004. Critical protection from renal ischemia reperfusion injury by CD55 and CD59. *J. Immunol.* 172: 3869-3875.
5. 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.

## CHROMOSOMAL LOCATION

Genetic locus: Cd59 (mouse) mapping to 2 E2.

## SOURCE

CD59 (R-79) is a rabbit polyclonal antibody raised against amino acids 23-101 of CD59 of rat origin.

## PRODUCT

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

## 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

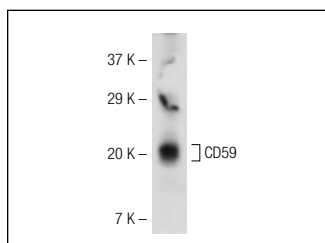
CD59 (R-79) is recommended for detection of CD59 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD59 siRNA (m): sc-35014, CD59 shRNA Plasmid (m): sc-35014-SH and CD59 shRNA (m) Lentiviral Particles: sc-35014-V.

Molecular Weight of CD59: 20 kDa.

Positive Controls: rat brain extract: sc-2392.

## DATA



CD59 (R-79): sc-9157. Western blot analysis of CD59 expression in rat brain tissue extract.

## SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2002. Early complement activation and decreased levels of glycosylphosphatidylinositol-anchored complement inhibitors in human and experimental diabetic retinopathy. *Diabetes* 51: 3499-3504.
2. Erne, B., et al. 2002. Rafts in adult peripheral nerve myelin contain major structural myelin proteins and myelin and lymphocyte protein (MAL) and CD59 as specific markers. *J. Neurochem.* 82: 550-562.
3. Zhang, C., et al. 2005. Effect of IL-4 on altered expression of complement activation regulators in rat pancreatic cells during severe acute pancreatitis. *World J. Gastroenterol.* 11: 6770-6774.
4. Yoshida, Y., et al. 2006. Dexamethasone modifies the susceptibility to serum cytotoxicity and increases the metastatic efficiency of a colon carcinoma cell line. *Exp. Mol. Pathol.* 81: 77-84.
5. Korbek, M., et al. 2008. Complement activation cascade and its regulation: relevance for the response of solid tumors to photodynamic therapy. *J. Photochem. Photobiol. B, Biol.* 93: 53-59.



Try **CD59 (H-7): sc-133170** or **CD59 (1B4): sc-53626**, our highly recommended monoclonal alternatives to CD59 (R-79).