Technical Data Sheet

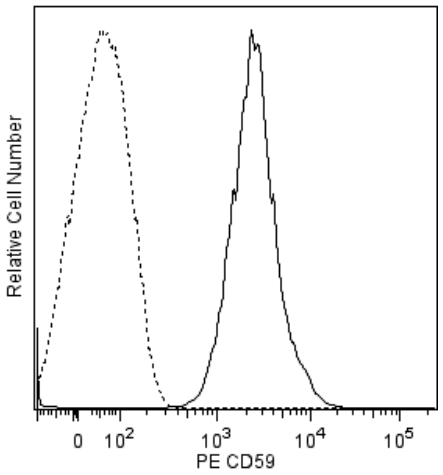
PE Mouse Anti-Rat CD59

Product Information

Material Number:	**562106**
Alternate Name:	MACIF; Membrane attack complex inhibition factor; Protectin
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	TH9
Immunogen:	Membrane attack complex-inhibitory proteins from Rat erythrocyte membranes
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The TH9 antibody monoclonal antibody specifically binds to CD59, a 21 kDa glycosyl-phosphatidyl inositol-anchored cell-surface glycoprotein of the Ly-6 superfamily. CD59 is expressed by many types of non-hematopoietic cells. In the rat hematopoietic system, CD59 has been detected on erythrocytes, monocytes, and some lymphocytes, but not on platelets. Soluble CD59 is found in body fluids and urine. CD59 is a complement regulatory protein that acts late in the complement cascade to prevent formation of the membrane attack complex (MAC). Therefore, CD59 is one of several proteins whose function is to protect host tissue from complement attack. Rat CD59 binds rat and human complement components and inhibits cytolysis mediated by complement from multiple species. CD59 has also been suggested to be a ligand for CD2 and to participate in T-cell costimulation.



Flow cytometric analysis of CD59 expression on rat bone marrow cells. *Bone marrow cells from a Lewis rat were stained with a BD Horizon™ V450 Mouse Anti-Rat CD45 antibody (Cat. No. 561587) and with either PE Mouse IgG1, κ Isotype Control (Cat. No. 550617, dashed line histogram) or a PE Mouse Anti-Rat CD59 antibody (Cat. No. 562106, solid line histogram). Flow cytometric fluorescence histograms were derived from events gated on CD45-negative cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:

Suggested Companion Products

Catalog Number	Name	Size	Clone
550617	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-31C
554656	Stain Buffer (FBS)	500 ml	(none)
561587	V450 Mouse Anti-Rat CD45	50 µg	OX-1

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

Funabashi K, Okada N, Matsuo S, Yamamoto T, Morgan BP, Okada H. Tissue distribution of complement regulatory membrane proteins in rats. *Immunology*. 1994; 81(3):444-451. (Biology)

Hughes TR, Piddlesden SJ, Williams JD, Harrison RA, Morgan BP. Isolation and characterization of a membrane protein from rat erythrocytes which inhibits lysis by the membrane attack complex of rat complement. *Biochem J.* 1992; 284(1):169-176. (Immunogen)

Lehto T, Morgan BP, Meri S. Binding of human and rat CD59 to the terminal complement complexes. *Immunology.* 1997; 90(1):121-128. (Biology)

Liversidge J, Dawson R, Hoey S, McKay D, Grabowski P, Forrester JV. CD59 and CD48 expressed by rat retinal pigment epithelial cells are major ligands for the CD2-mediated alternative pathway of T cell activation. *J Immunol.* 1996; 156(10):3696-3703. (Clone-specific: (Co)-stimulation, Stimulation)

Rushmere NK, Tomlinson S, Morgan BP. Expression of rat CD59: functional analysis confirms lack of species selectivity and reveals that glycosylation is not required for function. *Immunology.* 1997; 90(4):640-646. (Biology)

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