

Technical Data Sheet

Biotin Rat Anti-Mouse CD35

Product Information

Material Number:	553816
Alternate Name:	CR1, CD21b
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	8C12
Immunogen:	Purified mouse CR1
Isotype:	Rat (SD) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 8C12 antibody recognizes an epitope present on the 190-kDa complement receptor protein, originally designated CR1 (CD35), but not the 145-150-kDa CR2 (CD21) molecule. Unlike the human system, in which these proteins are products of independent genes, both of these mouse receptors are membrane proteins resulting from the alternative splicing of mRNA transcribed from the *Cr2* gene. Therefore, an alternative nomenclature has been proposed, designating the proteins Cr2-190 (CD21b) and Cr2-145 (CD21a), respectively. The epitope recognized by 8C12 mAb is only present on CD35/CD21b. Moreover, it has also been proposed that Cr2 is the true mouse genetic homologue of human CR1 (CD35). In the mouse, CD35 is expressed on the majority of peripheral B cells, on the majority of resident peritoneal macrophages, on peripheral blood granulocytes after treatment with *N*-formyl-Met-Leu-Phe, and on follicular dendritic cells, but not on thymocytes, T cells, erythrocytes, or platelets. In addition, it has not been detected, at the protein or mRNA level, in the macrophage cell line J774, bone marrow-derived macrophages, or thioglycollate-elicited peritoneal macrophages. The 8C12 mAb has been reported to inhibit rosette formation by C3b-bearing sheep erythrocytes, to block the complement-dependent trapping of immune complexes by follicular dendritic cells, and to down-regulate mouse CD35 expression upon in vivo application, inhibiting only some primary antibody responses to immunization. B lymphocytes of *Cr2*[null] mice display impaired humoral immune responses in vivo. The 8C12 mAb recognizes an epitope on mouse CD35 distinct from the epitope recognized by anti-mouse CD21/CD35 mAb 7G6 (Cat. no. 553817), and it does not block binding by 7G6 mAb to CD35.

*Please note that the isotype of 8C12 mAb was originally reported to be Rat IgG2c. Further investigations have demonstrated that the isotype of 8C12 mAb is Rat IgG2a.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553817	Purified Rat Anti-Mouse CD21/CD35	0.5 mg	7G6
553928	Biotin Rat IgG2a κ Isotype Control	0.25 mg	R35-95
554060	FITC Streptavidin	0.5 mg	(none)

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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3. 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.

References

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