Technical Data Sheet

Biotin Rat Anti-Mouse CD71

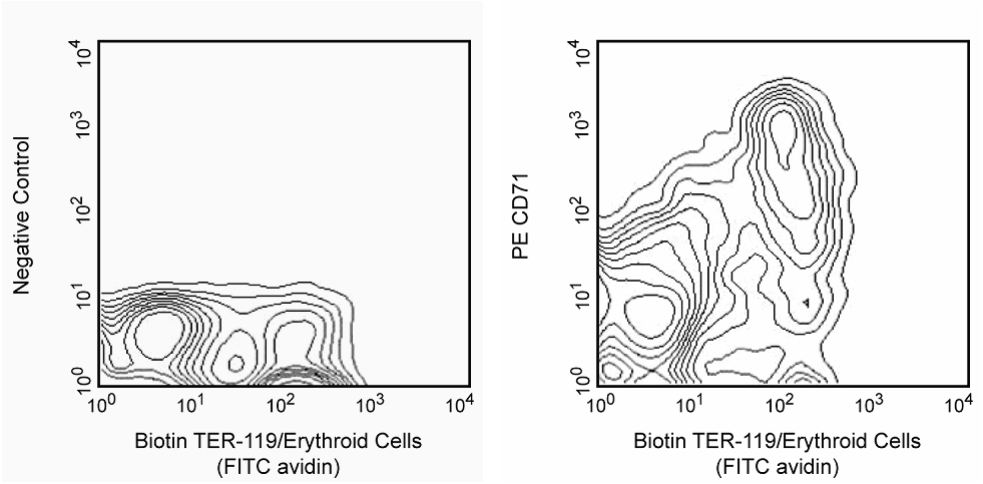
Product Information

Material Number:	**557416**
Alternate Name:	Transferrin Receptor
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	C2 (also known as C2F2)
Immunogen:	Mouse cell line
Isotype:	Rat (WF) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The C2 antibody reacts with the transferrin receptor CD71, a disulfide-linked homodimer of 95-kDa subunits. CD71 mediates one of the cellular mechanisms for iron uptake, and its expression is regulated according to the cell's iron requirements. It is expressed at high levels on developing erythroid cells, and it is upregulated after mitogenic activation of B or T lymphocytes. C2 mAb selectivity inhibits some types of T- and B-cell activation by down-regulation of transferrin receptor expression, but it does not block binding of transferrin.

Although the isotype of C2 mAb was originally reported to be Rat IgG2a, further investigations have demonstrated that it is Rat IgG1, κ.



Two-color analysis of the expression of CD71 on developing erythroid cells. *BALB/c bone-marrow leukocytes were simultaneously stained with PE-conjugated anti-mouse Erythroid Cells mAb TER-119 (Cat. no. 553673) and biotinylated mAb C2 (Right panel), followed by Avidin-FITC (Cat. no. 554057). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

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

BD Biosciences

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877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

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Suggested Companion Products

Catalog Number	Name	Size	Clone
553673	PE Rat Anti-Mouse TER-119/Erythroid Cells	0.2 mg	TER-119
554057	Avidin FITC	0.5 mg	(none)
553923	Biotin Rat IgG1, κ Isotype Control	0.25 mg	R3-34

Product Notices

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

Kemp JD, Thorson JA, Gomez F, Smith KM, Cowdery JS, Ballas ZK. Inhibition of lymphocyte activation with anti-transferrin receptor Mabs: a comparison of three reagents and further studies of their range of effects and mechanism of action. *Cell Immunol.* 1989; 122(1):218-230.(Clone-specific: Activation)

Kemp JD, Thorson JA, McAlmont TH, Horowitz M, Cowdery JS, Ballas ZK. Role of the transferrin receptor in lymphocyte growth: a rat IgG monoclonal antibody against the murine transferrin receptor produces highly selective inhibition of T and B cell activation protocols. *J Immunol.* 1987; 138(8):2422-2426.(Immunogen: Activation)

Lok CN, Loh TT. Regulation of transferrin function and expression: review and update. *Biol Signals Recept.* 1998; 7(3):157-178.(Biology)

Thorson JA, Smith KM, Gomez F, Naumann PW, Kemp JD. Role of iron in T cell activation: TH1 clones differ from TH2 clones in their sensitivity to inhibition of DNA synthesis caused by IgG Mabs against the transferrin receptor and the iron chelator deferoxamine. *Cell Immunol.* 1991; 134(1):126-137.(Clone-specific: Activation)