Technical Data Sheet

PE Rat Anti-Mouse CD71

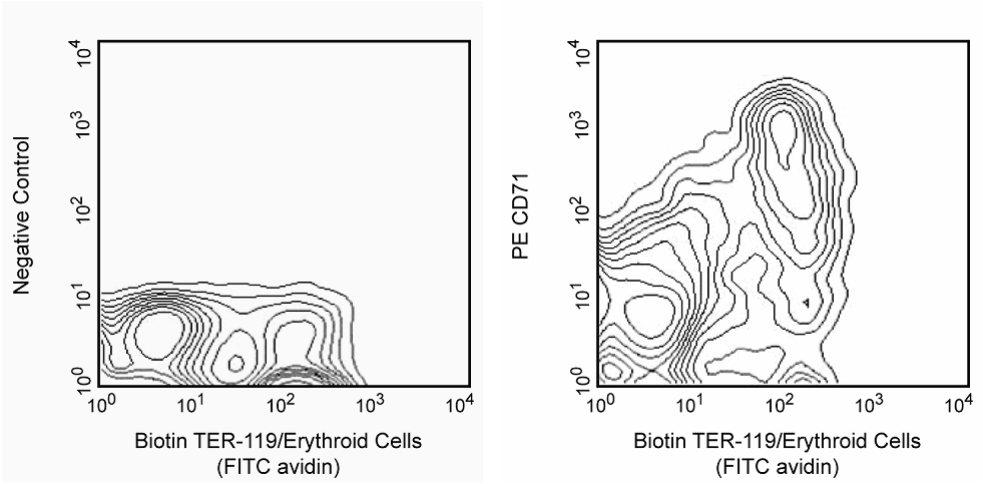
Product Information

Material Number:	**553267**
Alternate Name:	Transferrin Receptor
Size:	0.1 mg
Concentration:	0.2 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 biotinylated anti-mouse Erythroid Cells mAb TER-119 (Cat. no. 553672) and PE-conjugated 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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.
Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:
This antibody conjugate is compatible with intracellular staining protocols using the BD Cytofix/Cytoperm™ Kit (Cat. no 554714).

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554057	Avidin FITC	0.5 mg	(none)
553925	PE Rat IgG1, κ Isotype Control	0.1 mg	R3-34
553672	Biotin Rat Anti-Mouse TER-119/Erythroid Cells	0.5 mg	TER-119

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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharmingen/colors.
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.

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)