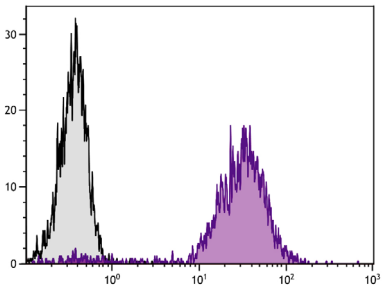
SouthernBiotech

Rat Anti-Mouse CD71

Cat. No.	Format	Size
1720-01	Purified (UNLB)	0.5 mg
1720-02	Fluorescein (FITC)	0.5 mg
1720-08	Biotin (BIOT)	0.5 mg
1720-09	R-phycoerythrin (PE)	0.1 mg
1720-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg



Mouse pre-B cell line 18-81 was stained with Rat Anti-Mouse CD71-PE (SB Cat. No. 1720-09).

Overview

Clone RI7217
Isotype Rat (BDIX) $IgG_{2a}\kappa$
Immunogen DMSO induced Friend erythroleukemia 745.6
Specificity Mouse CD71; Mr 95 kDa
Alternate Name(s) T9, transferrin receptor, TfR

Description

CD71, a type II transmembrane glycoprotein expressed on the cell surface as a homodimer, is the transferrin receptor. It is essential for the growth of normal and neoplastic cells. It is expressed at low levels on resting B and T lymphocytes but is upregulated during responses to antigens and mitogens presumably reflecting the iron dependence of proliferation. Its expression declines with maturation and differentiation. CD71 plays a critical role in cell proliferation by controlling the supply of iron which is essential for many metabolic pathways through the binding and endocytosis of transferrin, the major iron-carrying protein. It may also be involved in signal transduction via its association with the T cell receptor ζ chain. The monoclonal antibody RI7217 inhibits cell proliferation *in vitro*.

Applications

FC – Quality tested [1,2,4,5]
ICC – Reported in literature [5]
IP – Reported in literature [2]
WB – Reported in literature [9]
Block – Reported in literature [2,3]
Sep – Reported in literature [6]
Drug Delivery – Reported in literature [7,8]

Working Dilutions

Flow Cytometry	FITC and BIOT conjugates	≤ 1 μg/10^6 cells
	PE conjugate	≤ 0.2 μg/10^6 cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 μL	
Other Applications	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

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Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added*. Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of PBS. **Aliquot and store at or below -20°C.**
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific (M)SDS.

References

1. Lesley J, Hyman R, Schulte R, Trotter J. Expression of transferrin receptor on murine hematopoietic progenitors. Cell Immunol. 1984;83:14-25. (Immunogen, FC)
2. Lesley JF, Schulte RJ. Inhibition of cell growth by monoclonal anti-transferrin receptor antibodies. Mol Cell Biol. 1985;5:1814-21. (FC, IP, Block)
3. Kemp JD, Thorson JA, Gomez F, Snith 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;122:218-30. (Block)
4. van der Weyden L, Arends MJ, Rust AG, Poulogiannis G, McIntyre RE, Adams DJ. Increased tumorigenesis associated with loss of the tumor suppressor gene Cadm1. Mol Cancer. 2012;11:29. (FC)
5. Wang J, Wagner-Britz L, Bogdanova A, Ruppenthal S, Wiesen K, Kaiser E, et al. Morphologically homogeneous red blood cells present a heterogeneous response to hormonal stimulation. PloS One. 2013;8(6):e67697. (ICC, FC)
6. Romero JR, Suzuka SM, Nagel RL, Fabry ME. Expression of HbC and HbS, but not HbA, results in activation of K-Cl cotransport activity in transgenic mouse red cells. Blood. 2004;103:2384-90. (Sep)
7. Inoue S, Patil R, Portilla-Arias J, Ding H, Konda B, Espinoza A, et al. Nanobiopolymer for direct targeting and inhibition of EGFR expression in triple negative breast cancer. PLoS One. 2012;7(2):e31070. (Drug Delivery)
8. Inoue S, Ding H, Portilla-Arias J, Hu J, Konda B, Fujita M, et al. Polymalic acid-based nanobiopolymer provides efficient systemic breast cancer treatment by inhibiting both HER2/neu receptor synthesis and activity. Cancer Res. 2011;71:1454-64. (Drug Delivery)
9. Fiani ML, Beitz J, Turvy D, Blum JS, Stahl PD. Regulation of mannose receptor synthesis and turnover in mouse J774 macrophages. J Leukoc Biol. 1998;64:85-91. (WB)

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