

Technical Data Sheet

FITC Rat Anti-Mouse CD74

Product Information

Material Number:	555318
Alternate Name:	Ii
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	In-1
Immunogen:	A.TL mouse lymphocytes and B10.A mouse-derived CH1 B-cell lymphoma
Isotype:	Rat (WF) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The In-1 antibody reacts with CD74, the MHC class II-associated Invariant chain (Ii), expressed in I-A+ cell populations. Although it is predominantly expressed intracellularly, it has also been detected on the cell surface of some B-cell lines and at low levels on a small number of B lymphocytes. In the mouse, alternatively spliced transcripts encode 31-kDa and 41-kDa isoforms, and the cell-surface CD74 has a chondroitin sulfate side chain which allows it to interact with CD44. CD74 is directly involved in the intracellular transport of MHC class II molecules and antigen presentation, and it affects the maturation of T and B lymphocytes.

Preparation and Storage

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

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

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

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554715	BD Cytofix/Cytoperm Plus Kit (with BD GolgiStop)	250 tests	(none)
553988	FITC Rat IgG2b, κ Isotype Control	0.25 mg	A95-1

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to wwwbdbiosciences.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

- Bertolino P, Rabourdin-Combe C. The MHC class II-associated invariant chain: a molecule with multiple roles in MHC class II biosynthesis and antigen presentation to CD4+ T cells. *Crit Rev Immunol.* 1996; 16(4):359-379.(Biology)
- Bikoff EK, Huang LY, Episkopou V, van Meerwijk J, Germain RN, Robertson EJ. Defective major histocompatibility complex class II assembly, transport, peptide acquisition, and CD4+ T cell selection in mice lacking invariant chain expression. *J Exp Med.* 1993; 177(6):1699-1712.(Biology)
- Bodmer H, Viville S, Benoist C, Mathis D. Diversity of endogenous epitopes bound to MHC class II molecules limited by invariant chain. *Science.* 1994; 263(5151):1284-1286.(Biology)
- Cresswell P. Assembly, transport, and function of MHC class II molecules. *Annu Rev Immunol.* 1994; 12:259-293.(Biology)
- Elliott EA, Drake JR, Amigorena S, et al. The invariant chain is required for intracellular transport and function of major histocompatibility complex class II molecules. *J Exp Med.* 1994; 179(2):681-694.(Biology)
- Koch N, Koch S, Hämmerling GJ. Ia invariant chain detected on lymphocyte surfaces by monoclonal antibody. *Nature.* 1982; 299(5884):644-645.(Immunogen)
- Nakagawa T, Roth W, Wong P, et al. Cathepsin L: critical role in Ii degradation and CD4 T cell selection in the thymus. *Science.* 1998; 280(5362):450-453.(Biology)

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Naujokas MF, Morin M, Anderson MS, Peterson M, Miller J. The chondroitin sulfate form of invariant chain can enhance stimulation of T cell responses through interaction with CD44. *Cell*. 1993; 74(2):257-268.(Biology)

Shachar I, Flavell RA. Requirement for invariant chain in B cell maturation and function. *Science*. 1996; 274(5284):106-108.(Biology)

Viville S, Neefjes J, Lotteau V, et al. Mice lacking the MHC class II-associated invariant chain. *Cell*. 1993; 72(4):635-648.(Biology)