

Technical Data Sheet

Purified Rat Anti-Mouse Dendritic Cells

Product Information

Material Number:	551776
Alternate Name:	Dendritic Cell inhibitory Receptor-2 (DCIR2)
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	33D1
Immunogen:	Dendritic cells purified from mouse spleen and lymph node
Isotype:	Rat (SD) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 33D1 antibody reacts with an antigen on most dendritic cells (DC) of spleen, lymph node, and Peyer's patch, but not liver, bone marrow, or epidermal dendritic cells; macrophages; other leukocytes; or erythroid cells. Within the spleen, the majority of 33D1+ DC are localized in the marginal zones. Thymic dendritic cells may express a low level of the 33D1 antigen. It has been reported that bone-marrow DC can be induced to express the 33D1 antigen by culture in the presence of GM-CSF, and the resulting 33D1+ DC are effective in in vitro (induction of MLR) and in vivo (anti-tumoral vaccination) assays for antigen presentation. However, the addition of IL-4 to GM-CSF in bone-marrow cultures resulted in loss of 33D1 expression and enhanced the MLR-stimulatory activity of the DC. It has also been reported that 33D1 expression is upregulated when liver-derived DC are cultured on collagen-coated plates in the presence of GM-CSF. In vivo functional 33D1+ DC are induced in the brains of mice chronically infected with *Toxoplasma gondii*, probably via the parasite's induction of GM-CSF.

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Cytotoxicity	Reported
Immunofluorescence	Reported
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:

Since the 33D1 antigen may be expressed at low density on the cell surface, and polyclonal goat anti-rat Ig antibodies may have weak reactivity to the rat IgG2b mAb, we recommend amplification of the staining intensity by the use of biotinylated anti-rat IgG2b mAb RG7/11. (Cat. No. 553898) as the second-step reagent, followed by a bright third-step reagent, such as Streptavidin-PE (Cat. No. 554061) or Streptavidin-APC (Cat. No. 554067). It does not block allogeneic MLR.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553898	Biotin Mouse Anti-Rat IgG2b	0.5 mg	RG7/11.1
554067	APC Streptavidin	0.1 mg	(none)
554061	PE Streptavidin	0.5 mg	(none)
553986	Purified Rat IgG2b, κ Isotype Control	0.5 mg	A95-1

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.
- 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.
- Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

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References

- Crowley M, Inaba K, Witmer-Pack M, Steinman RM. The cell surface of mouse dendritic cells: FACS analyses of dendritic cells from different tissues including thymus. *Cell Immunol.* 1989; 118(1):108-125. (Biology)
- Dudziak D, Kamphorst AO, Nussenzweig MC, et al. Differential antigen processing by dendritic cell subsets in vivo. *Science.* 2007; 315(5808):107-111. (Clone-specific: Flow cytometry)
- Fischer HG, Bonifas U, Reichmann G. Phenotype and functions of brain dendritic cells emerging during chronic infection of mice with *Toxoplasma gondii*. *J Immunol.* 2000; 164(9):4826-4834. (Clone-specific: Immunohistochemistry)
- Inaba K, Inaba M, Romani N, et al. Generation of large numbers of dendritic cells from mouse bone marrow cultures supplemented with granulocyte/macrophage colony-stimulating factor. *J Exp Med.* 1992; 176(6):1693-1702. (Biology)
- Kelsall BL, Strober W. Distinct populations of dendritic cells are present in the subepithelial dome and T cell regions of the murine Peyer's patch. *J Exp Med.* 1996; 183(1):237-247. (Biology)
- Lu L, Woo J, Rao AS, et al. Propagation of dendritic cell progenitors from normal mouse liver using granulocyte/macrophage colony-stimulating factor and their maturational development in the presence of type-1 collagen. *J Exp Med.* 1994; 179(6):1823-1834. (Biology)
- Masurier C, Pioche-Durieu C, Colombo BM, et al. Immunophenotypical and functional heterogeneity of dendritic cells generated from murine bone marrow cultured with different cytokine combinations: implications for anti-tumoral cell therapy. *Immunology.* 1999; 96(4):569-577. (Biology)
- Nussenzweig MC, Steinman RM, Witmer MD, Gutchinov B. A monoclonal antibody specific for mouse dendritic cells. *Proc Natl Acad Sci U S A.* 1982; 79(1):161-165. (Immunogen: Cytotoxicity)
- Pulendran B, Lingappa J, Kennedy MK, et al. Developmental pathways of dendritic cells in vivo: distinct function, phenotype, and localization of dendritic cell subsets in FLT3 ligand-treated mice. *J Immunol.* 1997; 159(5):2222-2231. (Biology)
- Steinman RM, Gutchinov B, Witmer MD, Nussenzweig MC. Dendritic cells are the principal stimulators of the primary mixed leukocyte reaction in mice. *J Exp Med.* 1983; 157(2):613-627. (Clone-specific: Blocking, Cytotoxicity, Fluorescence microscopy)
- Vremec D, Zorbas M, Scollay R, et al. The surface phenotype of dendritic cells purified from mouse thymus and spleen: investigation of the CD8 expression by a subpopulation of dendritic cells. *J Exp Med.* 1992; 176(1):47-58. (Biology)
- Witmer MD, Steinman RM. The anatomy of peripheral lymphoid organs with emphasis on accessory cells: light-microscopic immunocytochemical studies of mouse spleen, lymph node, and Peyer's patch. *Am J Anat.* 1984; 170(3):465-481. (Clone-specific: Immunohistochemistry)
- Woo J, Lu L, Rao AS, et al. Isolation, phenotype, and allostimulatory activity of mouse liver dendritic cells. *Transplantation.* 1994; 58(4):484-491. (Biology)

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