Technical Data Sheet

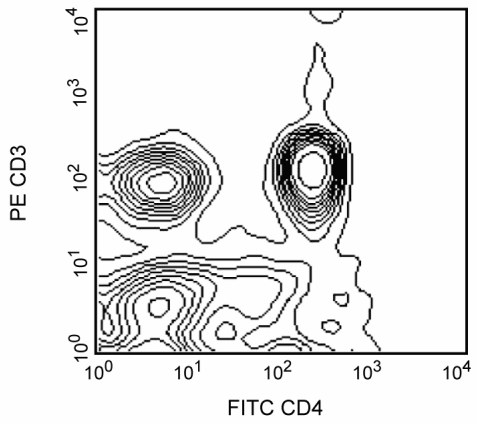
FITC Mouse Anti-Rat CD4

Product Information

Material Number:	**561834**
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	OX-38
Immunogen:	Rat thymocyte glycoproteins
Isotype:	Mouse (BALB/c) IgG2a, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The OX-38 antibody has been reported to react with the CD4 antigen on most thymocytes, a subpopulation of mature T lymphocytes (i.e., MHC class II-restricted T cells, including most T helper cells), monocytes, macrophages, and some dendritic cells. CD4 is an antigen coreceptor on the T-cell surface which interacts with MHC class II molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase lck. The OX-38 antibody has been reported to bind to the same epitope of CD4 as that recognized by W3/25 mAb, which is a different epitope than that recognized by OX-35 mAb (Cat. No. 554837). In vivo blocking of some cell-mediated immune responses by mAb OX-38 has been reported. Injection of OX-38 mAb induces allograft unresponsiveness in rats, with varying results depending on the rat strain used (high or low responder). Furthermore, in vivo depletion of CD4+ lymphocytes has been reported with this antibody.



Two-color analysis of the expression of CD4 on rat splenocytes. *Lewis splenocytes were incubated simultaneously with FITC Mouse anti-Rat CD4 clone OX-38 and PE Mouse anti-Rat CD3 clone G4.18 (Cat. No. 554833) monoclonal antibodies. The CD3-negative CD4-dim cells are the monocyte/macrophage population. Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Preparation and Storage

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

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.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553456	FITC Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178
554833	PE Mouse Anti-Rat CD3	0.2 mg	G4.18
554656	Stain Buffer (FBS)	500 ml	(none)

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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/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

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Bierer BE, Sleckman BP, Ratnofsky SE, Burakoff SJ. The biologic roles of CD2, CD4, and CD8 in T-cell activation. *Annu Rev Immunol.* 1989; 7:579-599. (Biology)

Janeway CA Jr. The T cell receptor as a multicomponent signalling machine: CD4/CD8 coreceptors and CD45 in T cell activation. *Annu Rev Immunol.* 1992; 10:645-674. (Biology)

Jefferies WA, Green JR, Williams AF. Authentic T helper CD4 (W3/25) antigen on rat peritoneal macrophages.. *J Exp Med.* 1985; 162:117-127. (Immunogen: Immunoprecipitation)

Liu L, Zhang M, Jenkins C, MacPherson GG. Dendritic cell heterogeneity in vivo: two functionally different dendritic cell populations in rat intestinal lymph can be distinguished by CD4 expression. *J Immunol.* 1998; 161(3):1146-1155. (Biology)

Stitz L, Sobbe M, Bilzer T. Preventive effects of early anti-CD4 or anti-CD8 treatment on Borna disease in rats. *J Virol.* 1992; 66(6):3316-3323. (Clone-specific: Blocking)

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Yin D, Fathman CG. Tissue-specific effects of anti-CD4 therapy in induction of allograft unresponsiveness in high and low responder. *Transpl Immunol.* 1995; 3(3):258-264. (Clone-specific: Blocking)