Technical Data Sheet

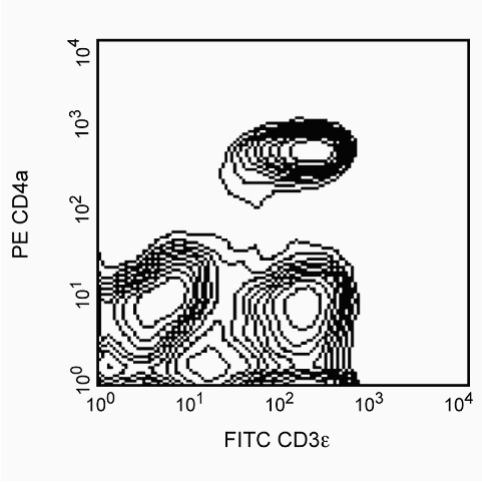
PE Mouse Anti-Pig CD4a

Product Information

Material Number:	**559586**
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	74-12-4
Immunogen:	dd miniature swine thymocytes
Isotype:	Mouse (BALB/c) IgG2b, κ
Reactivity:	QC Testing: Pig Tested in Development: Chicken
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 74-12-4 (also known as clone PT4) antibody reacts with CD4, a 55-kDa antigen expressed on T lymphocytes. This antibody does not react with CTL effectors, CTL precursors, or NK cells (ie, CD8[bright] cells) and it does not cross-react with human or bovine cells. Two peripheral T-helper lymphocyte phenotypes can be distinguished in the pig: CD4+CD8- and CD4+CD8[dull]. mAb 74-12-4 has been reported to inhibit proliferative responses of PBL to mitogen, soluble antigen, and lloantigen. It is only marginally effective for *in vivo* depletion of peripheral CD4+ T cells. Two alloantigenic forms of CD4 have been recognized in miniature swine based upon their recognition (CD4.1) or lack of recognition (CD4.2) by mAb 74-12-4; the CD4.2 phenotype displays an autosomal recessive, non-MHC-linked, pattern of inheritance. The molecular basis for the polymorphism is a cluster of nucleotide differences leading to multiple amino-acid substitutions in the Ig CDR2-like loop structure. This mAb was clustered as anti- CD4a at the First International Swine CD Workshop. It has been reported to cross-react with chicken leukocytes.



CD4 expression on peripheral blood lymphocytes. *Pig whole blood was stained simultaneously with PE-conjugated 74-12-4 and FITC-conjugated anti-pig CD3â BB23-8E6-8C8 (Cat. no. 559582) monoclonal antibodies. Erythrocytes were lysed (BD Pharm Lyse™ lysis buffer, Cat. no. 555899), non-viable leukocytes were excluded by staining with 7-AAD (BD Via-Probe™ cell viability dye, Cat. no. 555816/555815), and lymphocytes were identified by scatter profile. Flow cytometry was performed on a BD FACSCalibur™ 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

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
559582	FITC Mouse Anti-Pig CD3ε	0.1 mg	BB23-8E6-8C8
555899	Lysing Buffer	100 ml	(none)
555816	Cell Viability Solution	100 tests	(none)
559529	PE Mouse IgG2b, κ Isotype Control	0.1 mg	MPC-11

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. 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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