

Technical Data Sheet

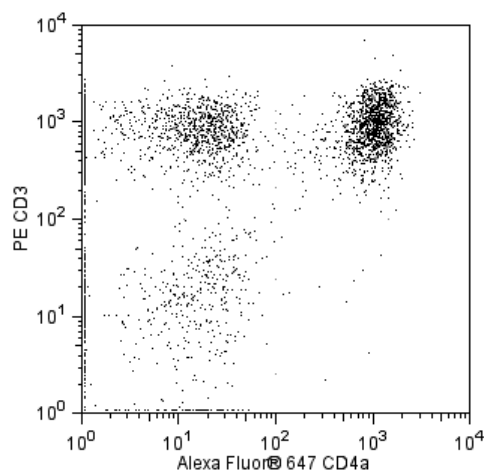
Alexa Fluor® 647 Mouse Anti-Pig CD4a

Product Information

Material Number:	561472
Alternate Name:	CD4; CD4 molecule; Lymphocyte antigen CD4
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	74-12-4
Immunogen:	dd miniature swine thymocytes
Isotype:	Mouse (BALB/c) IgG2b, κ
Reactivity:	QC Testing: Pig
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 74-12-4 (also known as clone PT4) monoclonal antibody specifically binds to 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 peripheral blood lymphocytes to mitogen, soluble antigen, and alloantigen. 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 crossreact with chicken leukocytes.



Multicolor flow cytometric analysis of CD4 expression on pig peripheral blood lymphocytes. Pig whole blood was stained simultaneously with Alexa Fluor® 647 Mouse Anti-Pig CD4a antibody (Cat. No. 561472) and PE Mouse Anti-Pig CD3 ϵ antibody (Cat. No. 561485). The erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). Two-color flow cytometric dot plots showing the correlated expression of CD4a versus CD3 were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

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

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

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

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Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
555899	Lysing Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
557903	Alexa Fluor® 647 Mouse IgG2b, κ Isotype Control	100 tests	27-35
561485	PE Mouse Anti-Pig CD3ε	50 µg	BB23-8E6-8C8

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmlingen/protocols for technical protocols.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

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