Technical Data Sheet

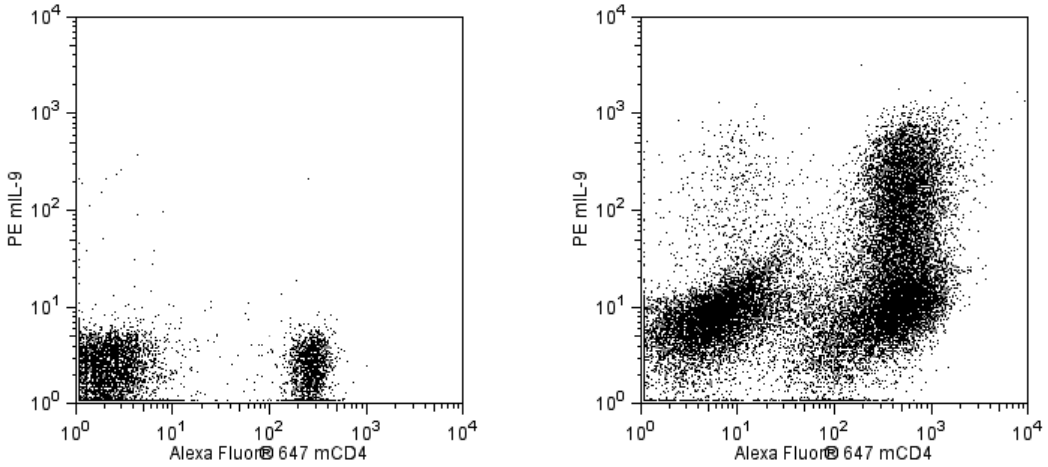
PE Armenian Hamster anti-Mouse IL-9

Product Information

Material Number:	**561463**
Alternate Name:	IL-9; Interleukin-9; MEA; P40; T-cell growth factor P40; TCGF III
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	D9302C12
Immunogen:	Mouse IL-9 Recombinant Protein
Isotype:	Armenian Hamster IgG2, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The D9302C12 monoclonal antibody specifically binds to the multifunctional mouse cytokine, Interleukin-9 (IL-9). IL-9 is a 126 amino acid-long glycoprotein that is produced by various subsets of activated CD4+ T cells. IL-9 acts on target cells by binding to and signaling through the heterodimeric IL-9 receptor (IL-9R) complex that is comprised of transmembrane IL-9 receptor alpha (IL-9Rα) and common gamma chain (γc) subunits. IL-9 can promote the survival, growth, proliferation and/or differentiation of various cell types including thymocytes, T cells, B cells, mast cells, and hematopoietic progenitor cells. IL-9 can augment IL-4-induced IgE and IgG1 production from lipopolysaccharide-primed mouse B cells and induce granzyme and high-affinity IgE receptor gene expression by mouse T helper cell clones and mast cell lines. IL-9 plays an important role *in vivo* in helminth elimination. The D9302C12 antibody neutralizes mouse IL-9 bioactivity.



Multicolor flow cytometric analysis of IL-9 expression by unstimulated and activated mouse spleen cells. *Mouse spleen cells were either unstimulated (Left Panel) or stimulated in a tissue culture plate coated with Anti-Mouse CD3e and soluble Anti-Mouse CD28 antibodies along with Recombinant Mouse IL-2, IL-4, and TGF-β proteins and Anti-Mouse IFN-γ antibody for 4 days. On day 4 the cells were harvested and restimulated with Phorbol 12-Myristate 13-Acetate (PMA; Sigma P-8139) plus Ionomycin (Sigma; I-0634) in the presence of BD GolgiStop™ Protein Transport Inhibitor for 5 hours (Right Panel). The cells were then fixed and permeabilized using a BD Cytofix/Cytoperm™ Fixation/Permeabilization Solution Kit followed by staining with PE Armenian Hamster anti-Mouse IL-9 (Cat. No. 561463) and Alexa Fluor® 647 Rat Anti-Mouse CD4 (Cat. No. 557681). Two-color flow cytometric dot plots showing the correlated expression patterns of CD4 versus IL-9 were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System. Other compatible fixation and permeabilization treatments are listed in the* Suggested Companion Products.

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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

Intracellular staining (flow cytometry)	Routinely Tested

Recommended Assay Procedure:

This fluorescent antibody is suitable for intracellular staining of mouse leukocytes using BD Cytofix/Cytoperm™ Reagents or BD Phosflow™ Fix Buffer I and Perm/Wash Buffer I (please see *Suggested Companion Products*).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554714	BD Cytofix/Cytoperm™ Fixation/Permeablization Kit	250 tests	(none)
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
554722	Fixation and Permeabilization Solution	125 ml	(none)
554655	Fixation Buffer	100 ml	(none)
554723	Perm/Wash Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
557870	Fix Buffer I	250 ml	(none)
557885	Perm/Wash Buffer I	125 ml	(none)
557681	Alexa Fluor® 647 Rat Anti-Mouse CD4	0.1 mg	RM4-5
553057	Purified NA/LE Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
553294	Purified NA/LE Hamster Anti-Mouse CD28	0.5 mg	37.51
550069	Recombinant Mouse IL-2	20 µg	(none)
550067	Recombinant Mouse IL-4	10 µg	(none)
356039	Transforming Growth Factor-b (TGF-b), human natural, 1 X 5 µg	NA	(none)
554408	Purified NA/LE Rat Anti-Mouse IFN-γ	0.5 mg	XMG1.2

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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