

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-9 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human IL-9 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 222604
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse IL-9 Gln19-Pro144 Accession # P15247.1
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Mouse splenocytes treated with anti-CD3/anti-CD28, Recombinant Mouse IL-4 (Catalog # 404-ML), Human TGF-β1 (Catalog # 100-B), and PMA/Ionomycin to induce Th9 development

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Mouse IL-9 was originally identified as a T cell-derived T cell growth factor III/P40 which could support the long term growth of certain mouse T helper clones in the absence of antigen or antigen-presenting cells. IL-9 can also prolong the *in vitro* survival of other T cell clones as well as potentiate the IL-2 dependent proliferation of mouse fetal thymocytes. However, this cytokine has no growth-stimulating activity on mouse cytolytic T cell clones or fresh T cells. Mouse IL-9 also has mast cell enhancing activity (MEA) and can enhance the mIL-3- or mIL-4-dependent proliferation of mouse bone marrow-derived mast cells. Furthermore, IL-9 will synergize with erythropoietin to support erythroid colony formation *in vitro*. The mouse IL-9 cDNA encodes a 144 amino acid residue precursor protein with an 18 amino acid signal peptide that is cleaved to form the mature cysteine-rich protein with a predicted molecular mass of 14 kDa. Mouse IL-9 contains four potential N-linked glycosylation sites and the native mIL-9 is a highly glycosylated protein. Human and mouse IL-9 share 56% amino acid sequence homology. Although mouse IL-9 is active on human cells, human IL-9 is not active on mouse cells.

References:

1. Renaud, J.E. *et al.* (1995) J. Leukoc. Biol **57**:303.

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