# Human IL-9 Antibody

Monoclonal Mouse $IgG_1$ Clone # 795908

Catalog Number: MAB2092

## DESCRIPTION

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| **Species Reactivity** | Human |
| **Specificity** | Detects human IL-9 in direct ELISA. |
| **Source** | Monoclonal Mouse $IgG_1$ Clone # 795908 |
| **Purification** | Protein A or G purified from cell culture supernatant |
| **Immunogen** | Human embryonic kidney cell line HEK293-derived human IL-9<br>Met1-Ile144<br>Accession # P15248 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

## 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.*

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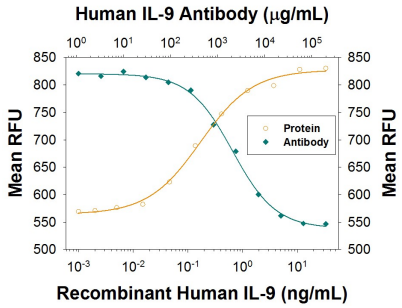
| **Neutralization** | Measured by its ability to neutralize IL-9-induced proliferation in the MO7e human megakaryocytic leukemic cell line. Avanzi, G. *et al.* (1988) Br. J. Haematol. **69**:359. The Neutralization Dose ($ND_{50}$) is typically 1-5 µg/mL in the presence of 2 ng/mL Recombinant Human IL-9. |

## DATA

**Neutralization**




**Cell Proliferation Induced by IL-9 and Neutralization by Human IL-9 Antibody.** Recombinant Human IL-9 (Catalog # 209-IL) stimulates proliferation in the MO7e human megakaryocytic leukemic cell line in a dose-dependent manner (orange line), as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Human IL-9 (2 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-9 Monoclonal Antibody (Catalog # MAB2092). The $ND_{50}$ is typically 1-5 µg/mL

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

Human IL-9 was originally identified as a cytokine found in the conditioned medium of a human T cell leukemia virus type I (HTLV-I) transformed T cell line that is mitogenic for the factor-dependent human megakaryoblastic leukemic cell line, M07e. The cDNA encoding this cytokine was subsequently isolated by functional expression cloning and found to be similar to the mouse T cell growth factor III/P40. This human cytokine and its murine homologue are now designated as human and mouse IL-9. Besides HTLV-I or -II transformed T cell lines, rhIL-9 is also produced by activated human PBLs. Human IL-9 was also reported to be expressed by primary and cultured Hodgkin and Reed-Sternberg (H-RS) cells derived from Hodgkin's disease patients, suggesting a possible role for rhIL-9 in the development of the pathophysiology of Hodgkin's disease.

Human and murine IL-9 are also capable of enhancing *in vitro* survival of human T cell lines as well as synergizing with Epo to support erythroid colony formation *in vitro*. However, the mast cell enhancing activity associated with rmIL-9 has not yet been demonstrated in the human system and no human IL-9-dependent T cell clones have been identified.

The gene for rhIL-9 has been mapped to human chromosome 5. As in the mouse system, the human 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. Human IL-9 contains four potential N-linked glycosylation sites and the native rhIL-9 is a highly glycosylated protein. Human and mouse IL-9 share 56% and 67% homology at the amino acid and nucleotide levels, respectively. Although murine IL-9 is active on human cells, human IL-9 is not active on mouse cells.



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