

DESCRIPTION

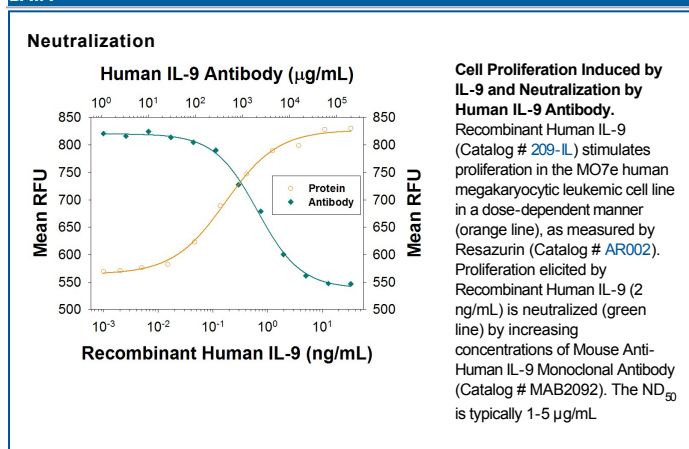
Species Reactivity	Human
Specificity	Detects human IL-9 in direct ELISA.
Source	Monoclonal Mouse IgG ₁ Clone # 795908
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived human IL-9 Met1-Ile144 Accession # P15248
Endotoxin Level	<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. *Small pack size (-SP) is supplied 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.

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



PREPARATION AND STORAGE

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. *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. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 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 rhIL-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.