

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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Neutralization Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

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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