IL-4 Protein, Mouse (HEK293)

Cat. No.:	HY-P701093
Synonyms:	rMuIL-4; BSF-1; Binetrakin; Lymphocyte stimulatory factor 1; Pitrakinra
Species:	Mouse
Source:	HEK293
Accession:	P07750 (H21-S140)
Gene ID:	16189
Molecular Weight:	Approximately 17-20 kDa due to the glycosylation.

PROPERTIES

AA Sequence	H I H G C D K N H L R E I I G I L N E V T G E G T P C T E M D V P N V L T A T K N T T E S E L V C R A S K V L R I F Y L K H G K T P C L K K N S S V L M E L Q R L F R A F R C L D S S I S C T M N E S K S T S L K D F L E S L K S I M Q M D Y S
Biological Activity	Measured in a cell proliferation assay using HT-2 cells. The ED_{50} this effect is ≤0.1557 ng/mL, corresponding to a specific activity is ≥6.42×10^6 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O or PBS.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Mouse Interleukin 4 is a 20-kDa glycoprotein, synthesized by activated T lymphocytes and mast cells, which regulates the growth and/or differentiation of a broad spectrum of target cells of the immune system, including B and T lymphocytes, macrophages, and hematopoietic progenitor cells. Murine Interleukin 4 (IL-4) is a potent mediator of an immune response, affecting both the growth and differentiation of a wide variety of cells in the hematopoietic lineage. This cytokine is expressed by activated T lymphocytes and mast cells as a 20-kDa glycoprotein. The cDNA for IL-4 isinitially is solated by two laboratories, using expression vectors and screening for either a IgG-inducing factor or a mast cell growth factor. The derived amino acid sequence from the cDNA clones is used to predict a protein backbone for IL-4 of 14 kDa. This is

consistent with the observation that N-glycanase treatment of natural IL-4, to remove N-linked carbohydrates, yields a protein core of 14 kDa. Initial experiments with deglycosylated native IL-4 and with deglycosylated recombinant IL-4, expressed initially in yeast as a heterogeneous, hyperglycosylated molecule, suggested that the carbohydrate modifications of IL-4 do not affect its ability to bind to receptor and to stimulate T and B cell growth[1].

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