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Datasheet for ABIN2018117 IL-4 Protein (AA 25-153)

2 Images



Overview

Quantity:	50 µg
Target:	IL-4 (IL4)
Protein Characteristics:	AA 25-153
Origin:	Human
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active
Product Details	
Characteristics:	ED50< 0.25 ng/mL, measured in a cell proliferation assay using TF-1 human erythroleukemic cells, corresponding to a specific activity of >4 x 10^6 units/mg AA 25-153, expressed with an N-terminal Met.
Purity:	> 95 % as analyzed by SDS-PAGE and HPLC.
Endotoxin Level:	< 0.2 EU/µg, determined by LAL method.
Target Details	

Target:	IL-4 (IL4)
Alternative Name:	Interleukin-4 (IL-4) (IL4 Products)
Background:	Interleukin-4 (IL-4) is a pleiotropic cytokine regulates diverse T and B cell responses including
	cell proliferation, survival, and gene expression. It has important effects on the growth and
	differentiation of different immunologically competent cells. Interleukin-4 is produced by mast

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	cells, T cells, and bone marrow stromal cells[1]. IL-4 regulates the differentiation of native CD4+
	T cells (Th0 cells) into helper Th2 cells, and regulates the immunoglobulin class switching to
	the IgG1 and IgE isotypes. IL-4 has numerous important biological functions including
	stimulating B-cells activation, T-cell proliferation and CD4+ T-cells differentiation to Th2 cells. It
	is a key regulator in hormone control and adaptive immunity[2]. IL-4 also plays a major role in
	inflammation response and wound repair via activation of macrophage into M2 cells[3]. IL-4 is
	stabilized by three disulphide bonds forming a compact globular protein structure[4]. Four
	alpha-helix bundle with left-handed twist is dominated half of the protein structure with 2
	overhand connections and fall into a 2-stranded anti-parallel beta sheet[5].Recombinant human
	IL-4 (rhIL-4) is a 129 amino acid protein expressed in mammalian CHO system. The
	approximate molecular weight is 15 kDa analyzed by non-reducing SDS-PAGE.
	Synonyms: IL-4, B cell growth factor-1 (BCGF-1), B cell stimulatory factor-1 (BSF-1), B cell
	differentiation factor (BCDF), T cell growth factor-2 (TCGF-2), Mast-cell growth factor-2 (MCGF-
	2)
Molecular Weight:	15 kDa, observed by non-reducing SDS-PAGE.
NCBI Accession:	NP_000580
Pathways:	JAK-STAT Signaling, Regulation of Leukocyte Mediated Immunity, Positive Regulation of
	Immune Effector Process, Production of Molecular Mediator of Immune Response, Proton
	Transport, Activated T Cell Proliferation
Application Details	
Restrictions:	For Research Use only
Handling	
Format:	Lyophilized
Reconstitution:	Reconstituted in ddH2O or PBS at 100 µg/mL.
Buffer:	Lyophilized after extensive dialysis against PBS.
Storage:	-80 °C
Storage Comment:	Lyophilized recombinant human Interleukin 4 (IL-4) remains stable up to 6 months at -80 $^\circ$ C
	from date of receipt. Upon reconstitution, rhIL-4 should be stable up to 1 week at 4 $^\circ$ C or up to 2
	months at -20 °C
Expiry Date:	6 months

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SDS-PAGE

Image 1. 5 μ g of IL-4, Human was resolved with SDS-PAGE under reducing (R) and non-reducing (N) conditions and visualized by Coomassie Blue staining.

Activity Assay

Image 2. IL-4, Human stimulates cell proliferation of TF-1 cells. The ED50 for this effect is less than 0.25ng/mL (0.25ng/mL)

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