

Recombinant Rhesus Macaque Interleukin-4 (Rhesus Macaque IL-4)

Product Information

Product Name	Cat#	Size
	90134ES08	5 µg
Recombinant Rhesus Macaque Interleukin-4 (Rhesus Macaque IL-4)	90134ES60	100 µg
	90134ES76	500 µg

Product Description

Interleukin-4 (IL-4), also known as B cell-stimulatory factor-1, is a monomeric, approximately 13 kDa-18 kDa Th2 cytokine that shows pleiotropic effects during immune responses. It is a glycosylated polypeptide that contains three intrachain disulfide bridges and adopts a bundled four alpha -helix structure. Rhesus IL-4 is synthesized with a 24 amino acid (aa) signal sequence. Mature rhesus IL-4 shares 97%, 93%, and 93% aa sequence identity with baboon, chimpanzee, and human IL-4, respectively, and 39% -50% aa sequence identity with bovine, mouse, and rat IL-4. IL-4 exerts its effects through two receptor complexes. The type I receptor, which is expressed on hematopoietic cells, is a heterodimer of the ligand binding IL-4 R alpha and the common gamma chain (a shared subunit of the receptors for IL-2, -7, -9, -15, and -21). The type II receptor on nonhematopoietic cells consists of IL-4 R alpha and IL-13 R alpha 1. The type II receptor also transduces IL-13 mediated signals. IL-4 is primarily expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils. It promotes cell proliferation, survival, and immunoglobulin class switch to IgE in B cells, acquisition of the Th2 phenotype by naïve CD4+ T cells, priming and chemotaxis of mast cells, eosinophils, and basophils, and the proliferation and activation of epithelial cells. IL-4 plays a dominant role in the development of allergic inflammation and asthma .

Product Properties

Synonyms	BSF-1, Lymphocyte Stimulatory Factor 1
Accession	P51492
Unigene	Mmu.3375.
Source	E.coli-derived Rhesus Macaque IL-4, His25-Ser153.
Molecular Weight	Approximately 14.9 kDa.
AA Sequence	HNCHIALREI IETLNSLTEQ KTLCTKLTIT DILAASKNTT EKETFCRAAT VLRQFYSHHE KDTRCLGATA QQFHRHKQLI RFLKRLDRNL WGLAGLNSCP VKEANQSTLE DFLERLKTIM REKYSKCSS
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 96% by SDS-PAGE and HPLC analyses.
Biological Activity	The ED ₅₀ as determined by a cell proliferation assay using human TF-1 cells is less than 1.0 ng/mL, corresponding to a specific activity of > 1.0 × 10 ⁶ IU/mg. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, pH 7.4, 5% trehalose.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!