HB220425

Recombinant Rat Interleukin-5 (Rat IL-5)

Product Information

Product Name	Cat#	Size
Recombinant Rat Interleukin-5 (Rat IL-5)	90170ES10	10 μg
	90170ES60	100 μg
	90170ES76	500 μg

Product Description

Interleukin-5 (IL-5) is a secreted glycoprotein that belongs to the alpha -helical group of cytokines. Unlike other family members, it is present as a covalently linked antiparallel dimer. The cDNA for rat IL-5 encodes a signal peptide and a 113 amino acid (aa) secreted mature protein. Mature rat IL-5 shares 70%, 94%, 56%, 63%, 59% and 59%, aa sequence identity with human, mouse, canine, equine, feline and porcine IL-5, respectively. IL-5 is primarily produced by CD4+ Th2 cells, but also by activated eosinophils, mast cells, EBV-transformed B cells, Reed-Sternberg cells in Hodgkin’s disease, and IL-2-stimulated invariant natural killer T cells (iNKT). IL-5 increases production and mobilization of eosinophils and CD34+ progenitors from the bone marrow and causes maturation of eosinophil precursors outside the bone marrow. The receptor for human IL-5, mainly expressed by eosinophils, but also found on basophils and mast cells, consists of a unique ligand-binding subunit (IL-5 R alpha) and a shared signal- transducing subunit, beta c. IL-5 R alpha first binds IL-5 at low affinity, then associates with preformed beta c dimers, forming a high-affinity receptor. IL-5 also binds proteoglycans, potentially enhancing its activity. Soluble forms of IL-5 R alpha antagonize IL-5 and can be found in vivo. In humans, IL-5 primarily affects cells of the eosinophilic lineage, and promotes their differentiation, maturation, activation, migration and survival, while in mice IL-5 also enhances Ig class switching and release from B1 cells. IL-5 also promotes differentiation of basophils and primes them for histamine and leukotriene release.

Product Properties

Synonyms	B-cell Differentiation Factor I, Eosinophil Differentiation Factor, TRF
Accession	Q08125
GeneID	Rn.44227.
Source	E.coli-derived Rat IL-5, Met20-Val132, with an N-terminal Met.
Molecular Weight	Approximately 26.2 kDa.
AA Sequence	MEIPMSTVVK ETLIQLSTHR ALLTSNETMR LPVPTHKNHQ LCIGEIFQGL DILKNQTVRG GTVEILFQNL SLIKKYIDGQ KEKCGEERRK TRHFLDYLQE FLGVMSTEWA MEV
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 98% 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 0.5 ng/mL, corresponding to a specific activity of > 2.0×10^6 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 PBS, pH 7.4.

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℃ to -80℃ 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!