

Recombinant human IL5

Catalog No: #AG0004

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Description

Product Name	Recombinant human IL5
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE; > 95% by SEC-HPLC
Immunogen Description	Ile20-Ser134
Target Name	IL5
Other Names	Human IL-5, h-IL-5, rh-IL-5, recombinant IL-5, interleukin-5
Accession No.	Uniprot:P05113Gene ID:3567
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GeneID	3567
Target Species	human
Calculated MW	13.1 KDa
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Background

Interleukin-5 (IL-5) is a secreted glycoprotein that belongs to the alpha-helical group of cytokines (1-3). Unlike other family members, it is present as a covalently linked antiparallel dimer (4, 5). The cDNA for human IL-5 encodes a signal peptide and a 115 amino acid (aa) mature protein. Mature human IL-5 shares 70%, 70%, 62%, 71%, 70% and 66%, aa sequence identity with mouse, rat, canine, equine, feline and porcine IL-5, respectively and shows cross-reactivity with mouse IL-5. 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) (1-3, 6-8). 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 (1, 6, 9, 10). 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 (3, 6, 11). IL-5 R alpha first binds IL-5 at low affinity, then associates with preformed beta c dimers, forming a high-affinity receptor (12). IL-5 also binds proteoglycans, potentially enhancing its activity (13). Soluble forms of IL-5 R alpha antagonize IL-5 and can be found in vivo (10, 14). 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 (1-3, 9, 10, 15, 16). IL-5 also promotes differentiation of basophils and primes them for histamine and leukotriene release (17).

Note: This product is for in vitro research use only