

Recombinant Mouse IL-3 (carrier-free)

Catalog# / Size	575502 / 10 µg 575504 / 25 µg 575506 / 100 µg 575508 / 500 µg
Regulatory Status	RUO
Other Names	Interleukin-3, Burst promoting activity, Eosinophil colony stimulating factor (Eo-CSF), Hematopoietic cell growth factor (HCGF), Mast (MGF/MCGF), Multi-colony stimulating (Multi-CSF), P cell stimulating activity (PCSA), Thy1 inducing factor
Description	IL-3 is the most potent growth factor for basophils followed by granulocyte-macrophage colony-stimulating factor and IL-5. These cytokines also act on mature basophils through specific receptors, thereby mediating adhesion, migration, and releasability. IL-3 is highly expressed by mast cells, and rapid and large amount of autocrine IL-3 production is responsible for mast cell survival by IgE in the absence of antigen. IL-3 has also been implicated in the pathogenesis of several chronic inflammatory diseases, including asthma, atherosclerosis, and neurodegenerative disorders, such as multiple sclerosis.

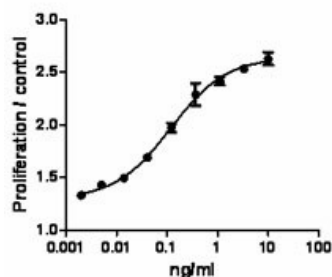
Product Details

Source	Mouse IL-3, amino acids Ala 27 - Cys 166 (Accession# NM_010556), was expressed in <i>E. coli</i> .
Molecular Mass	The 140 amino acid recombinant protein has a predicted molecular mass of 15673.7 Da. The DTT-reduced protein migrates at approximately 16 kDa and the non-reduced protein migrates with slightly greater mobility by SDS-PAGE.
Purity	>98%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in 10 mM NaHPO ₄ pH 7.2, 0.15 M NaCl.
Endotoxin Level	Less than 0.01ng per µg cytokine as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	ED ₅₀ = 0.05 - 0.200 ng/ml, corresponding to a specific activity of 0.5-2.0 x 10 ⁷ units/mg, as determined by the dose dependent stimulation of a M-NFS-60 cell proliferation assay.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .
Additional Product Notes	View more applications data for this product in our Scientific Poster Library .
Product Citations	<ol style="list-style-type: none">Paris J <i>et al.</i> 2019. Cell Stem Cell. 25(1):137-148 . PubMedSinclair JKL, <i>et al.</i> 2018. Cell Chem Biol. 25:857. PubMedChao JL, <i>et al.</i> 2021. Cell Rep Med. 2:100399. PubMed

Antigen Details

Structure	Cytokine
Distribution	Activated T cells, Th1, Th2, mast cells, eosinophils, keratinocytes, NK cells, and endothelial cells.
Function	Interleukine-3 is a pleiotropic factor which promotes both self-renewal and differentiation of early multipotential progenitors and is involved in inducible hematopoiesis in response to infections. IL-3 stimulates colony formation of megakaryocytes, neutrophils, and macrophages from bone marrow cultures.
Interaction	Erythroid cells, megakaryocytes, neutrophils, eosinophils, basophils, mast cells, monocytic lineages
Ligand/Receptor	Heterodimer IL-3R α (CD123) and two alternate β -subunits, AIC2A binds IL-3 and is specific to IL-3R α , AIC2B (CDw131) shared in common with IL-5R, GM-CSFR.
Cell Type	Hematopoietic stem and progenitors
Biology Area	Stem Cells
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Kohno M, <i>et al.</i> 2005 <i>Blood</i> 105:2059-2065.2. Valent P and Dahinden CA, <i>et al.</i> 2010 <i>Curr Opin Hematol</i> 17:60-66.3. Kleemann R, <i>et al.</i> 2008 <i>Cardiovascular Research</i> 79:360-376.4. Murphy JM and Young IG, <i>et al.</i> 2006 <i>Vitam Horm</i> 74:1-30.
Gene ID	16187

Product Data



M-NFS-60 cell proliferation induced by mouse IL-3.

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