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# 1. Description

Products

Mouse IL-15, research grade.

Recombinant mouse interleukin 15.

	Content in µg	Order no.
	2	130-094-071
	10	130-094-072
	100	130-094-640
Biological activity	<ul> <li>The ED<sub>50</sub> is ≤20 ng/mL corresponding to an activity of ≥5×10<sup>4</sup> U/mg.</li> <li>▲ Note: The ED<sub>50</sub> was determined by stimulation of the proliferation of mouse CTLL-2 cell.</li> </ul>	
Primary structure	Single, non-glycosylated polypeptide chain (115 amino acid residues).	
Molecular mass	13.3 kDa.	
Source	Produced in E. coli.	
Product format	Lyophilized from a filtered (0.2 $\mu m)$ buffer solution.	
Stabilizer	None.	
Purity	>95% as determined by SDS-PAGE analysis.	
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.	
Storage	Lyophilized Mouse IL-15, research grade should be stored at –20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at –20 °C or below. Avoid repeated freeze-thaw cycles.	
Reconstitution	It is recommended to reconstitute lyophilized Mouse IL-15, research grade with deionized sterile-filtered water to a final concentration of 0.04-1.0  mg/mL in a minimal volume of 50 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.	

## 1.1 Background information

IL-15 is a member of the four  $\alpha$ -helix bundle cytokine family. It is produced by different cell types, including epithelial cells, monocytes, muscle, and placenta cells. IL-15 is a potent lymphoid cell growth factor and shares many biological properties with IL-2. Like IL-2, IL-15 stimulates the proliferation of activated T cells

# Mouse IL-15 research grade

and promotes the generation of cytotoxic T lymphocytes (CTLs). IL-2 and IL-15 also induce the generation, proliferation, and activation of NK cells as well as B cell growth and immunoglobulin production. In addition, IL-15 is important for the maintenance of CD8<sup>+</sup> memory T cells. For binding and signaling IL-15 uses the unique IL-15 receptor  $\alpha$ -chain, but shares the  $\beta$ - and  $\gamma$ -chain of the IL-2 receptor.

# 1.2 Applications

Mouse IL-15 can be used for a variety of applications, including:

- Activation and expansion of NK and NKT cells.
- *In vitro* differentiation of NK cells, e.g., from purified CD34<sup>+</sup> cells.
- *In vitro* T cell expansion, e.g., of naive CD8<sup>+</sup> T cells, and T cell activation, e.g., of CTLs.

Optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www. miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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