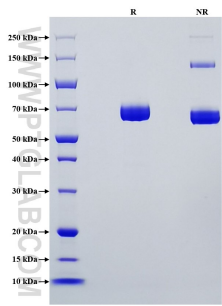


# Recombinant Mouse IL-12 protein (His Tag)

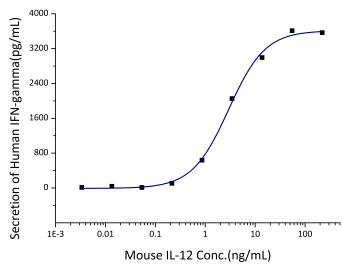
Catalog Number: Eg0742

Basic Information	<b>Species:</b> Mouse <b>EC50:</b> 1-5 ng/mL	<b>Purity:</b> >95 %, SDS-PAGE	<b>Tag:</b> His Tag
Technical Specifications	<b>Purity:</b> >95 %, SDS-PAGE <b>Endotoxin Level:</b> <0.1 EU/ µg protein, LAL method <b>Source:</b> HEK293-derived Mouse IL-12 protein Met23-Ser335 (Mouse IL-12B Accession# P43432)+linker+Arg23-Ala215 (Mouse IL-12A Accession# P43431) with His tag at the C-terminus. <b>GeneID:</b> 16160(IL-12B) & 16159(IL-12A) <b>Accession:</b> P43432(IL-12B) & P43431(IL-12A) <b>Predicted Molecular Mass:</b> 59.2 kDa <b>SDS-PAGE:</b> 60-75 kDa, reducing (R) conditions <b>Formulation:</b> Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.		
Biological Activity	Measured by its ability to induce IFN-gamma secretion in human natural killer lymphoma NK-92 cells. The ED50 for this effect is 1-5 ng/mL.		
Storage and Shipping	<b>Storage:</b> It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• Until expiry date, -20°C to -80°C as lyophilized proteins.</li> <li>• 3 months, -20°C to -80°C under sterile conditions after reconstitution.</li> </ul> <b>Shipping:</b> The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.		
Reconstitution	Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.		
Background	Interleukin 12 (IL-12) is a heterodimeric cytokine that is capable of inducing a wide range of immune effects. IL-12 itself is composed of one 35 kDa α-chain subunit (p19 or p35) paired with one 40 kDa β-chain subunit (p40). It is a member of the larger IL-12 family, which also includes 3 other cytokines; IL-23, IL-27, and IL-35. IL-12 is a pro-inflammatory cytokine produced by monocytes, macrophages, dendritic cells, neutrophils, and B cells. The IL-12 receptors (IL-12R) are made up of IL-12R β 1 and IL-12R β 2. The activation of IL-12R causes tyrosine phosphorylation of primarily JAK2 and TYK2, which can then phosphorylate STAT1, STAT3, STAT4, and STAT5. IL-12 has been shown to have multiple functions, including inducing Th1 cell differentiation, increasing activation and cytotoxic capacities of T and NK cells, and inhibiting or reprogramming immunosuppressive cells. IL-12 also induces the production of large amounts of IFN- γ.		
References	1. Schwarz E and Carson WE 3rd. (2022). J Leukoc Biol. 112(3):557-567. 2. Vignali DA and Kuchroo VK. (2012). Nat Immunol. 13(8):722-8. 3. Yan J. et al. (2018). Cold Spring Harb Perspect Biol. 10(7):a028530. 4. Nguyen KG. et al. (2020). Front Immunol. 11:575597.		
Synonyms	IL12(IL12B+IL12A), IL-12, IL-12 p40/IL-12 p35, IL-12 p70, IL-12B/IL-12A		

Selected Validation Data



Purity of Recombinant Mouse IL-12 was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.



Measured by its ability to induce IFN-gamma secretion in human natural killer lymphoma NK-92 cells. The ED50 for this effect is 1-5 ng/mL