# IL-13 Protein, Mouse (HEK293)

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| **Cat. No.:** | HY-P73168 |
| **Synonyms:** | IL13; Interleukin-13; IL-13; NC30 |
| **Species:** | Mouse |
| **Source:** | HEK293 |
| **Accession:** | P20109 (A19-F131) |
| **Gene ID:** | 16163 |
| **Molecular Weight:** | Approximately 14 kDa |

## PROPERTIES

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| **Biological Activity** | Measured in a cell proliferation assay using TF-1 human erythroleukemic cells and the $ED_{50}$ is typically 2-12 ng/mL. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | IL-13 Protein assumes pivotal roles in allergic inflammation and the immune response to parasite infection. It synergizes with IL2 in regulating interferon-gamma synthesis, stimulating B-cell proliferation, and activating eosinophils, basophils, and mast cells. Beyond its immunological functions, IL-13 plays a crucial role in controlling IL33 activity by modulating the production of transmembrane and soluble forms of interleukin-1 receptor-like 1/IL1RL1. It demonstrates the capacity to antagonize Th1-driven proinflammatory immune responses and downregulates the synthesis of various proinflammatory cytokines, including IL1, IL6, IL10, IL12, and TNF-alpha, partly through the suppression of NF-kappa-B. Not confined to hematopoietic cells, IL-13 also acts on nonhematopoietic cells such as endothelial cells, inducing vascular cell adhesion protein 1/VCAM1, which is crucial in the recruitment of eosinophils. Its biological effects are mediated through receptors comprising the IL4R chain and the IL13RA1 chain, activating JAK1 and TYK2, ultimately leading to the activation of STAT6. Besides IL13RA1, another receptor, IL13RA2, acts as a high-affinity decoy for IL-13, mediating internalization and depletion of extracellular IL-13. IL-13 interacts directly with IL13RA2, further illustrating the complexity of its regulatory mechanisms. |

**Caution: Product has not been fully validated for medical applications. For research use only.**

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