

Recombinant mouse IL13

Catalog No: #AG0040

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

Description

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| Product Name | Recombinant mouse IL13 |
| Host Species | HEK293 |
| Purification | > 95% by Tris-Bis PAGE;> 95% by SEC-HPLC |
| Immunogen Description | Ala19-Phe131 |
| Target Name | IL13 |
| Other Names | Mouse BHR1interleukin-13; Mouse IL13; mL-13; IL-13MGC116788; interleukin 13; MGC116786; NC30; P600 |
| Accession No. | Uniprot:P20109Gene ID:16163 |
| Uniprot | P20109 |
| GeneID | 16163 |
| Target Species | mouse |
| Calculated MW | 12.4 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

IL-13 is a 17 kDa immunoregulatory cytokine that plays a key role in the pathogenesis of allergic asthma and atopy. It is secreted by Th1 and Th2 CD4+ T cells, NK cells, visceral smooth muscle cells, eosinophils, mast cells, and basophils (1 - 3). IL-13 circulates as a monomer with two internal disulfide bonds that contribute to a bundled four alpha -helix configuration (4, 5). Mature mouse IL-13 shares 57%, 75%, and 58% amino acid sequence identity with human, rat, and rhesus IL-13, respectively. Despite the low homology, it exhibits cross-species activity between human, mouse, and rat (6, 7). IL-13 has diverse activities on numerous cell types (8). On macrophages, IL-13 suppresses the production of proinflammatory cytokines and other cytotoxic substances. On B cells, IL-13 induces immunoglobulin class switching to IgE, upregulates the expression of MHC class II, CD71, CD72, and CD23, and costimulates proliferation. IL-13 upregulates IL-6 while downregulating IL-1 and TNF-alpha production by fibroblasts and endothelial cells. IL-13 binds with low affinity to IL-13 R alpha 1, triggering IL-13 R alpha 1 association with IL-4 R alpha. This high affinity receptor complex also functions as the type 2 IL-4 receptor complex (9, 10). Additionally, IL-13 binds with high affinity to IL-13 R alpha 2 which is expressed intracellularly, on the cell surface, and as a soluble molecule (11 - 14). IL-13 R alpha 2 regulates the bioavailability of both IL-13 and IL-4 and is overexpressed in glioma and several bronchial pathologies (10, 15, 16). Compared to wild type IL-13, the atopy-associated R110Q variant of IL-13 elicits increased responsiveness from eosinophils that express low levels of IL-13 R alpha 2 (17).

Note: This product is for in vitro research use only