



Rat anti Mouse IL13 monoclonal antibody, clone 49324 (CABT-L312)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

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| Specificity | Detects mouse IL-13 in ELISAs and Western blots. In ELISAs, less than 0.1% cross-reactivity with recombinant human IL-13 is observed. |
| Target | IL-13 |
| Immunogen | E. coli-derived recombinant mouse IL-13, Accession #P20109 |
| Isotype | IgG2A |
| Source/Host | Rat |
| Species Reactivity | Mouse |
| Clone | 49324 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Conjugate | Unconjugated |
| Applications | ELISA(Cap), WB |
| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| Format | Lyophilized; Small package size(SP): Liquid |
| Size | 100 µg, 500 µg |
| Buffer | PBS with Trehalose |
| Preservative | None |

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| Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution. |
| Ship | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C. |

BACKGROUND

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| Introduction | 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. IL-13 circulates as a monomer with two internal disulfide bonds that contribute to a bundled four alpha-helix configuration. 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. IL-13 has diverse activities on numerous cell types. On macrophages, IL-13 suppresses the production of pro-inflammatory 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. 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. IL-13 R alpha 2 regulates the bioavailability of both IL-13 and IL-4 and is overexpressed in glioma and several bronchial pathologies. 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. |
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| Keywords | Immunoregulatory cytokine |
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GENE INFORMATION

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| UniProt ID | P20109 |
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