

Recombinant Rat Interleukin-13, 113a.a.

Information

Gene ID	116553
Accession #	P42203
Alternate Names	T-cell Activation Protein P600
Source	Escherichia coli.
M.Wt	Approximately 12.3 kDa, a single non-glycosylated polypeptide chain containing 113 amino acids.
AA Sequence	TPGPVRRSTS PPVALRELIE ELSNITQDQK TSLCNSSMWV SVDLTAGGFC AALESLTNIS SCNAIHRTQR ILNGLCNQKA SDVASSPPDT KIEVAQFISK LLNYSKQLFR YGH
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & 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 - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, pH 7.4, 5 % trehalose.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using human TF-1 cells is less than 5 ng/ml, corresponding to a specific activity of > 2.0 × 10 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Rat Interleukin-13, 113a.a.	10µg	100µg	500µg

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
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ μ g of rRtIL-13, 113a.a. as determined by LAL method.

Description

Interleukin-13 (IL-13) is expressed by the IL13 gene and secreted by many cell types, especially T helper type 2 (Th2) cells. The high resolution structure of IL-13 reported to be a monomer with two internal disulfide bonds that contribute to a bundled four α -helix configuration. Targeted deletion of IL-13 in mice resulted in impaired Th2 cell development and indicated an important role for IL-13 in the expulsion of gastrointestinal parasites. IL-13 exerts anti-inflammatory effects on monocytes and macrophages and it inhibits the expression of inflammatory cytokines such as IL-1 β , TNF- α , IL-6 and IL-8. IL-13 has also been shown to enhance B cell proliferation and to induce isotype switching resulting in increased production of IgE. Mature rat IL-13 shares 59 %, 75 %, and 60 % amino acid sequence identity with human, mouse, and rhesus IL-13, respectively.

Reference

1. Schmutz J, Martin J, Terry A, et al. 2004. Nature, 431: 268-74
2. Wynn TA. 2003. Annu Rev Immunol, 21: 425-56
3. Moy FJ, Diblasio E, Wilhelm J, et al. 2001. J Mol Biol, 310: 219-30
4. Lakkis FG, Cruet EN, Nassar GM, et al. 1997. Biochem Biophys Res Commun, 235: 529-32.

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