

TECHNICAL DATA SHEET

# Recombinant Human IL-13 Variant (Carrier-free)

Catalog Number: 21-7150

**RPx-Pro™ Recombinant Protein**  
PRODUCT INFORMATION

**CONTENTS**

Recombinant Human IL-13 Variant (Carrier-free)

**DESCRIPTION**

IL-13, produced primarily by Th2 cells and to a lesser extent by mast and NK cells, is an immunoregulatory cytokine. Its various functions include induction of matrix metalloproteinases, enhancement of IgE secretion from activated B cells and B cell proliferation. Additionally, IL-13 plays a role in the inhibition of the expression of inflammatory cytokines and modulates resistance to various parasites. IL-13 is also secreted by eosinophils and in the lung is essential in regulating eosinophilic inflammation, mucus secretion, and airway hyperresponsiveness. Its function as a central mediator of allergen-induced asthma is well documented. Single nucleotide polymorphisms result in variants associated with specific asthmatic or allergic phenotypes, and certain variants will show enhanced functional activity as compared to wild-type IL-13.

**MOLECULAR MASS**

Recombinant Human IL-13 Variant, with a substitution of Q for R at position 112, consists of 115 amino acids and a calculated molecular weight of 12.6 kDa.

**AMINO ACID SEQUENCE**

MSPGPPVPPST ALRELIEELV NITQNQKAPL CNGSMVWSIN LTAGMYCAAL ESLINVSGCS AIEKTQRMLS GFCPHKVSAG QFSSLHVRDT KIEVAQFVKD  
LLLHLKLFKFR EGQFN

**SOURCE**

E. coli

**APPLICATIONS**

Bioassay

**PURITY**

98 %

**STORAGE**

-20°C

**PROTEIN CONTENT**

Verified by UV Spectroscopy and/or SDS-PAGE gel.

**ENDOTOXIN LEVEL**

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

**AUTHENTICITY**

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**CROSS REACTIVITY**

Mouse

**BIOACTIVITY**

Compared to wild type IL-13, this variant shows a two fold increase in bioactivity both in vitro and in vivo. Dose dependent STAT6 activation and IL-13 dependent gene induction in transfected A201.1 cells were used to demonstrate this difference in vitro. Measuring the induction of airway hyper-responsiveness indicates increased in vivo activity.

**RESEARCH AREAS**

Immune System, AIDS, Inflammation, Cancer, Differentiation, Stem Cells

**RECONSTITUTION**

See Certificate of Analysis (COA) for lot specific reconstitution information.

**REFERENCES**

McKenzie AN, Culpepper JA, de Waal Malefyt R, Brière F, Punnonen J, Aversa G, Sato A, Dang W, Cocks BG and Menon S. 1993. Proc Natl Acad Sci USA. 90(8): 3735–3739. Ying S1, Meng Q, Barata LT, Robinson DS, Durham SR, Kay AB. 1997. J Immunol. 158(10): 5050-5057. Wynn TA. 2003. Annu Rev Immunol. 21: 425-456. Vercelli D. 2002. Curr Opin Allergy Clin Immunol. 2(5): 389-393. Minty A, Chalou P, Derocq JM, Dumont X, Guillemot JC, Kaghad M, Labit C, Lepatois P, Liauzun P and Miloux B 1993 Nature 362(6417): 248–50.

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