TECHNICAL DATA SHEET

Recombinant Human sIL-4Rα (Carrier-free)

Catalog Number: 21-7148

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

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Recombinant Human sIL-4Rα (Carrier-free)

DESCRIPTION

IL-4R alpha is a Type I transmembrane protein belonging to the class I cytokine receptor family and is a component of two different receptor complexes. When associated with the common gamma chain, which is required for signaling, it binds IL-4 with higher affinity. When complexed with IL-13R alpha I, interaction with both IL-4 and IL-13 is enabled. Through JAK/STAT signal transduction pathways, cell-specific responses including Th2 differentiation, mucosal immunity, allergic inflammation and IgE production result. The soluble form of IL-4R alpha, generated through proteolysis in the human, retains biologic activity and is able to antagonize IL-4.

MOLECULAR MASS

Recombinant Human sIL-4Rα corresponds to the entire extracellular domain of IL-4Rα and consists of 209 amino acids.

AMINO ACID SEQUENCE

GNMKVLQEPT CVSDYMSIST CEWKMNGPTN CSTELRLLYQ LVFLLSEAHT CIPENNGGAG CVCHLLMDDV VSADNYTLDL WAGQQLLWKG SFKPSEHVKP RAPGNLTVHT NVSDTLLLTW SNPYPPDNYL YNHLTYAVNI WSENDPADFR IYNVTYLEPS LRIAASTLKS GISYRARVRA WAQCYNTTWS EWSPSTKWHN SYREPFEQH

SOURCE	APPLICATIONS	PURITY	STORAGE
HEK293 cells	Bioassay	98 %	-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

BIOACTIVITY

The expected ED_{50} of ≤ 5.0 ng/ml, corresponding to a specific activity of ≥ 2 x 10^5 units/mg, is measured by determining the ability to inhibit the IL-4 dependent proliferation of human TF-1 cells while in the presence of 0.5 ng/ml IL-4.

RESEARCH AREAS

Immune System, Apoptosis, Cancer, Allergy, Inflammation, Receptors, Differentiation, Proliferation, Stem Cells, Cell Culture, Transplantation

RECONSTITUTION

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

REFERENCES

Maliszewski CR, Sato TA, Davison B, Jacobs CA, Finkelman FD and Fanslow WC. 1994. Proc Soc Exp Biol Med. 206(3): 233-7. Kruse S, Forster J, Kuehr J and Deichmann KA. 1999. Int Immunol. 11(12): 1965-1970.Kondo M, Takeshita T, Ishii N, Nakamura M, Watanabe S, Arai K and Sugamura K. 1993. Science. 262(5141): 1874-1877. Wills-Karp M and Finkelman FD. 2008. Sci Signal. 1(51): pe55. Jung T, Schrader N, Hellwig M, Enssle KH and Neumann C. 1999. Int Arch Allergy Immunol. 199(1): 23-30.