

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (stably transfected)-derived human IL-4R alpha protein
Met1-His232
Accession # P24394

N-terminal Sequence Analysis Gly24

Predicted Molecular Mass 24 kDa

SPECIFICATIONS

SDS-PAGE 26-39 kDa, reducing conditions

Activity Measured by its ability to inhibit IL-4-dependent proliferation of TF-1 human erythroleukemic cells. Kitamura, T. *et al.* (1989) *J. Cell Physiol.* **140**:323.
The ED₅₀ for this effect is 2-10 ng/mL in the presence 0.2 ng/mL of Recombinant Human IL-4 (Catalog # 204-IL) .

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

BACKGROUND

Interleukin 4 Receptor alpha (IL-4 Rα), also known as CD124 and BSF receptor, is a widely expressed 140 kDa transmembrane glycoprotein in the class I cytokine receptor family. IL-4 Rα plays an important role in Th2-biased immune responses, alternative macrophage activation, mucosal immunity, allergic inflammation, tumor progression, and atherogenesis (1-5). Mature human IL-4 Rα consists of a 207 amino acid (aa) extracellular domain (ECD) that contains a cytokine binding region and one fibronectin type-III domain, a 24 aa transmembrane segment, and a 569 aa cytoplasmic domain that contains one Box 1 motif and one ITIM motif (6, 7). Within the ECD, human IL-4 Rα shares 51% aa sequence identity with mouse and rat IL-4 Rα. Soluble forms of IL-4 Rα, generated by alternate splicing or proteolysis, retain ligand binding properties and inhibit IL-4 bioactivity (8-11). IL-4 Rα is a component of two distinct receptor complexes and shows species selectivity between human and mouse (6). It can associate with the common gamma chain (γc) to form the IL-4 responsive type I receptor in which γc increases the affinity for IL-4 and enables signaling (12, 13). It can alternatively associate with IL-13 Rα1 to form the type II receptor which is responsive to both IL-4 and IL-13 (14, 15). The use of shared receptor components contributes to the overlapping biological effects of IL-4 and IL-13 as well as other cytokines that utilize γc (i.e. IL-2, IL-7, IL-9, IL-15, and IL-21) (16, 17).

References:

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