

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (stably transfected)-derived
Thr24-Ile241
Accession # Q61727

N-terminal Sequence Analysis Thr24

Predicted Molecular Mass 25.5 kDa

SPECIFICATIONS

SDS-PAGE 30-35 kDa, reducing conditions

Activity Measured by its ability to inhibit IL-10-dependent proliferation of MC/9-2 mouse mast cells. Thompson-Snipes, L. *et al.* (1991) J. Exp. Med. **173**:507.
The ED₅₀ for this effect is 1-3 μ g/mL in the presence of 1 ng/mL recombinant mouse IL-10.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/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-10 Receptor alpha (IL-10 R α), also known as IL-10 R1, is a 90-110 kDa transmembrane glycoprotein member of the class II cytokine receptor family (1). IL-10 R α is required for mediating the effects of IL-10, a critical molecule in the control of microbial infections, allergic and autoimmune inflammation, and cancer (2-5). Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells (6). IL-10 R α is the ligand specific subunit of the IL-10 receptor complex. Noncovalent dimers of IL-10 bind to IL-10 R α , resulting in the recruitment of IL-10 R β (6-8). IL-10 R β is a ubiquitously expressed transmembrane protein that does not bind IL-10 by itself but is required for signal transduction and *in vivo* IL-10 responsiveness (7, 9). IL-10 R β also associates with IL-20 R α , IL-22 R α , or IL-28 R α to form the receptor complexes for IL-22, IL-26, IL-28, and IL-29 (1). Immunosuppressive signal transduction through the IL-10 receptor complex can be inhibited by activation of TLR2, 4, or 9, enabling strengthened immune responses during infection (10). Polymorphisms of human IL-10 R α may limit viral immune evasion by retaining full responsiveness to human IL-10 but responding weakly to the cytomegalovirus homolog of IL-10 (11). Mature human IL-10 R α consists of a 214 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 322 aa cytoplasmic domain (12). Within the ECD, human IL-10 R α shares 59% aa sequence identity with mouse and rat IL-10 R α .

References:

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