

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (baculovirus)-derived human IL-12/IL-23 p40 protein
Ile23-Ser328
Accession # P29460

N-terminal Sequence Analysis Ile23

Predicted Molecular Mass 34.7 kDa

SPECIFICATIONS

SDS-PAGE 40 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human IL-12 R β 1 Fc Chimera (Catalog # 839-B1) is immobilized at 1 μ g/mL (100 μ L/well), the concentration of Recombinant Human IL-12/IL-23 p40 Monomer that produces 50% of the optimal binding response is 1-6 ng/mL.

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

Purity >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/mL in sterile PBS.

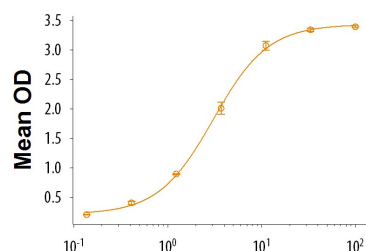
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

DATA

Binding Activity



Recombinant Human IL-12/IL-23 p40 (ng/mL)

When Recombinant Human IL-12 R β 1 Fc Chimera (Catalog # 839-B1) is immobilized at 1 μ g/mL (100 μ L/well), Recombinant Human IL-12/IL-23 p40 Monomer (Catalog # 309-IL) binds with an ED₅₀ of 1-6 ng/mL.

BACKGROUND

Interleukin 12, also known as natural killer cell stimulatory factor (NKSF) or cytotoxic lymphocyte maturation factor (CLMF), is a pleiotropic cytokine originally identified in the medium of activated human B lymphoblastoid cell lines. IL-12 is produced by macrophages and B lymphocytes and has multiple effects on T cells and NK cells, including stimulation of cytotoxic activity, proliferation, and promotion of Th1 development as well as IFN- γ and TNF production. IL-12 is a disulfide-linked, 70 kDa (p70) heterodimeric glycoprotein composed of a 40 kDa (p40) subunit and a 35 kDa (p35) subunit. The p40 and p35 subunits by themselves have no IL-12 activity, the p40 dimer has been shown to bind the IL-12 receptor and to be an IL-12 antagonist. Free p35 has not been detected in supernatant solutions of cultured cells expressing only p35 or both p35 and p40 mRNAs. In contrast, p40 is secreted in excess of IL-12 in cells expressing both p35 and p40 mRNAs. The p40 subunit of IL-12 has been shown to have extensive amino acid sequence homology to the extracellular domain of the human IL-6 receptor while the p35 subunit shows distant but significant sequence similarity to IL-6, G-CSF, and chicken MGF. These observations have led to the suggestion that IL-12 might have evolved from a cytokine/soluble receptor complex. Human and mouse IL-12 share 70% and 60% amino acid sequence homology in their p40 and p35 subunits, respectively. IL-12 apparently shows species specificity with human IL-12 reportedly showing minimal activity in the murine system.