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#31502**Mouse IL-12 Recombinant Protein**

10 µg


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MW (kDa):
57.5

UniProt ID:
#P43431, #P43432

Entrez-Gene Id:
16159, 16160
Background

Interleukin-12 (IL-12) is a heterodimeric pro-inflammatory cytokine best known for inducing IFN- γ production in T cells and NK cells (1,2). The IL-12 family of cytokines is composed of IL-12, IL-23, IL-27, and IL-35. The predominant physiological producers of IL-12 are antigen-presenting cells (APCs), such as DCs and macrophages (3). IL-12 consists of two disulfide-linked subunits (p35 and p40) that regulate the biosynthesis of IL-12p70 (4). The effects of IL-12 are mediated through its high-affinity receptor that contains two subunits: IL-12R β 1 and IL-12R β 2 (3,5). Binding of IL-12 induces naïve CD4⁺ T cells to differentiate into T helper 1 (T_H1) cells mainly through the activation of Stat4 (3,5). The effect that IL-12 has on innate and adaptive immunity makes it a target of interest when studying different autoimmune diseases and cancers (2).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg mIL-12.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant mouse IL-12 was expressed in genetically modified HEK 293 cells and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant mIL-12 was determined in a secreted embryonic alkaline phosphatase (SEAP) induction assay using HEK-BlueTM IL-12 cells. The ED₅₀ of each lot is less than or equal to 15 ng/ml. HEK-BlueTM IL-12 cells were purchased from InvivoGen Inc.

Background References

1. Trinchieri, G. (2003) *Nat Rev Immunol* 3, 133-46.
2. Zundler, S. and Neurath, M.F. (2015) *Cytokine Growth Factor Rev* 26, 559-68.
3. Sun, L. et al. (2015) *Cytokine* 75, 249-55.
4. Jalah, R. et al. (2013) *J Biol Chem* 288, 6763-76.
5. Floss, D.M. et al. (2016) *Mol Biol Cell* 27, 2301-16.

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