

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant IL-12, Human(HEK 293-expressed)

Catalog Number: BK0312-1mg

Source: HEK 293

Quantity: 1mg

Description:

Interleukin 12 (IL-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. 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 mouse system.

Molecular Weight:

Approximately 75 kDa, consisting of a 306 amino acid residue p40 subunit and a 197 amino acid residue p35 subunit.

Purity:

> 95% as analyzed by SDS-PAGE and HPLC.

Biological Activity:

EC50 < 2 ng/ml, measured by the induction of IFN- γ from NK cells co-stimulated with IL-18, corresponding to a specific activity of > 1×10^6 units/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized after extensive dialysis against PBS.

AA Sequence:

p35:RNLPVATPDPGMFPCLHHSQNLLRAVSNMLQ

KARQTLE-
FYPCTSEEIDHEDITKDKTSTVEACLPLELT-
KNESCLNSRETSFITNGSCLASRKTSFMMAL-
CLSSIIYEDLK-
MYQVEFKTMNAKLLMDPKRQIFLDQNMLAVI-
DELMQALNFNSETVPQKSSLEEDFYKTKI-
KLCILLHAFRIRAVTIDRVMSYLNAS
p40:IWELKKDVYVVELDWYPDAPGEMVVLTC
TPEEDGITWTLQSSSEVLGSGKTLTIQVKEFG-
DAGQYTCHKGGEVLSHSLLLLHKKEDG-
IWSTDILKDQKEPKNKTFLRCEAK-
NYSGRFTCWWLTTISTDLT-
FSVKSSRGSSDPQGVTCGAATLSAERVRGDNKE
YEYSVECQEDSAC-
PAAEESLPIEVMVDVAHKLKYENYTSS-
FFIRDIKPDPPKNLQLKPLK-
NSRQVEVSWEYPDTWSTPHSYFSLT-
FCVQVQGKSKREKKDRVFTDKTSAT-
VICRKNASISVRAQDRYYSSSWSEWASVPCS

Endotoxin:

< 0.2 EU/ μ g, determined by LAL method.

Reconstitution:

Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Storage:

Lyophilized recombinant Human Interleukin 12(IL-12) remains stable up to 6 months at -80 $^{\circ}$ C from date of receipt. Upon reconstitution, rh-IL12 should be stable up to 1 week at 4 $^{\circ}$ C or up to 2 months at -20 $^{\circ}$ C.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. For research use only.