

IL12A / IL12B

Recombinant Human IL-12 p70 / IL-12A & IL-12B Heterodimer

Catalog No.	CS529A CS529B CS529C	Quantity:	2 µg 10 µg 100 µg
Alternate Names:	Interleukin 12 p70, NK cell stimulating factor, NKSF1 & 2, cytotoxic lymphocyte maturation factor p35 & p40 subunits, CLMF		
Description:	<p>Recombinant Human IL-12 is a glycosylated heterodimeric polypeptide containing 503 amino acids, 197 amino acid residues of the p35 subunit and 306 amino acid residues of the p40 subunit that are linked by disulfide-bonds between cysteines.</p> <p>Interleukin-12 (IL-12), also known as NKSF or 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 murine 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.</p>		
UniProt ID:	IL-12A P29459 / IL-12B P29460		
Gene ID:	p35 subunit: 3592 / p40 subunit: 3593		
Source:	HEK293		
Molecular Weight:	57.2 kDa (22.5+34.7) 503aa (197+306)		
Formulation:	Lyophilized from sterile-filtered PBS, pH 7.4 5-8% trehalose, mannitol and 0.01% Tween 80 added as cryoprotectants prior to lyophilization.		
Purity:	>95% by SDS-PAGE analysis.		
Endotoxin Level:	< 1.0 EU/µg by LAL analysis		
Biological Activity:	The specific activity was determined by the dose-dependent release of IFN-gamma from human NK92 cells in the presence of 20 ng/ml rIL-2 and is typically 0.1-0.5 ng/ml.		
Reconstitution:	Store as supplied at -20°C to -80°C for up to 1 year. Upon reconstitution, prepare working aliquots and store at -20°C to -80°C. It is recommended that a carrier protein such as 0.1% HSA or BSA is added for long term storage. Avoid repeated freeze-thaw cycles.		
Storage & Stability:	Store lyophilized protein at -20°C to -80°C. Reconstituted protein is stable for 1 week at 2-4°C. For long term storage, aliquot and store at -20°C to -80°C with a carrier protein such as 0.1% HSA or BSA as a stabilizer. This depends upon the particular application employed. Avoid repeated freeze-thaw cycles.		



Amino Acid Sequence IL-12 p35 Subunit

RNLPVATPDP GMFPCLHHSQ NLLRAVSNML QKARQTLEFY PCTSEEIDHE
DITKDKTSTV EACLPLELTK NESCLNSRET SFITNGSCLA SRKTSFMMAL
CLSSIEDLK MYQVEFKTMN AKLLMDPKRQ IFLDQNMLAV IDELMQALNF
NSETVPQKSS LEEPDFYKTK IKLCILLHAF RIRAVTIDRV MSYLNAS

IL-12 p40 Subunit

IWELKKDVYV VELDWYPDAP GEMVVLTCDT PEEDGITWTL DQSSEVLGSG
KTLTIQVKEF GDAGQYTCHK GGEVLSHLL LLHKKEDGIW STDILKDQKE
PKNKTFLRCE AKNYSGRFTC WWLTTISTDL TFSVKSSRGS SDPQGVTGGA
ATLSAERVRG DNKEYEYSVE CQEDSACPAA EESLPIEVMV DAVHKLKYEN
YTSSFFIRDI IKPDPPKNLQ LKPLKNSRQV EVSWEYPDTW STPHSYFSLT
FCVQVQGKSK REKKDRVFTD KTSATVICRK NASISVRAQD RYYSSSWSEW ASVPCS

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