

Recombinant Rat IL-12

Catalog No: CS66

Description	Recombinant Rat Interleukin-12 is produced by our Mammalian expression system and the target gene encoding Met23-Ser335(p40)&Arg23-Ser215(p35) is expressed with a 6His tag at the C-terminus.
Source	Human Cells
Alternative name	Interleukin-12; IL-12
Accession No.	Q9R278&Q9R103
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.
Quality Control	Purity: Greater than 95% as determined by reducing SDS-PAGE. Endotoxin: Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
Storage	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Amino Acid Sequence	MWELEKDVYVVEVDWRPDAPGETVTLTCDSPPEEDDITWTSDQRRGVIGSGKTLTITVREFLDAGQYTC HRGGETLSHSHLLHKKENGWSTEILKNFKNKTFLKCEAPNYSGRFTCSWLVRNTDLKFNKSSSSSP ESRAVTCGRASLSAEKVTLNQRDYKEYSVACQEDVTCPTAEETLPIELVVEAQQQNKYENYSTSFFIRDI IKPDPKPNLQVKPLKNSQVEVSWEYPDSWSTPHSYFSLKFFVRIQRKKEKTKETEEECNQKGAFLVEKT SAEVQCKGANICVQAQDRYYNSSCSKWTCVPCRGRSHHHHHH&RVIPVSGPAKCLNQSQNLLKTTDD MVRTAREKLKHYSCTAGDIDHEDITRDKTSTLEACLPLELHKNESCLATKETSSIIRGSCLPPQKTSLMM TLCLGSIYEDLKMYQSEFQAINAALQSHNHQQITLDRNMLMAIDELMRSLNHSGETLHQKAPMGADPY RVKMKLCILLHAFSTRVMTINRV MNYLSSSHHHHHH
Background	Interleukin 12 (IL-12) is the founding member of the IL-12 family of heterodimeric cytokines, which have important immunological functions. IL-12 is composed of two disulfide-linked subunits of 35 kDa and 40 kDa, respectively. The 35 kDa subunit (p35) is an α-helical protein homologous to IL-6 and GCSF. The 40 kDa subunit (p40) contains one fibronectin type III and one Ig C2-like domain, and has a high degree of structural homology to type I cytokine receptors. Whereas p35 subunit is unique to IL-12, the p40 subunit is also utilized in IL-23. Mature rat p35 is a 194 amino acids (aa) protein that is secreted as a heterodimer linked to p40. It contains three potential N-linked glycosylation sites and shares 86%, and 58% aa sequence identity with mouse and human p35, respectively. Mature rat p40 contains 313 aa and can exist in multiple forms, including monomer, homodimer, heterodimer linked to p19 (forming IL23), and heterodimer linked to p35 (forming IL-12). IL12 facilitates hematopoietic stem cell proliferation, induces NK cell proliferation, and potentiates the expansion and late activation of Th1 CD 4+ T cells.

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