

Recombinant Human IL-12

Information

Gene ID	3592
Accession #	P29459
Alternate Names	Interleukin-12, Natural killer cell stimulatory factor chain 2, NKSF2, Cytotoxic lymphocyte maturation factor 40 kDa subunit, CLMF p40.
Source	<i>Spodoptera frugiperda</i> , Sf21 (baculovirus)
M.Wt	Apparent molecular mass of 60 kDa in SDS-PAGE under non-reducing conditions, 41 kDa and 29 kDa under reducing conditions, a disulfide-linked heterodimer consisting of the 306 amino acid rHuIL-12 p40 and the 197 amino acid rHuIL-12 p35 subunits.
AA Sequence	HuIL-12 p40: Ile23 - Ser328; Accession # P29460 HuIL-12 p35: Arg23 - Ser219; Accession # P29459
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.2.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile PBS to a concentration of 0.1 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriately buffered solutions.
Biological Activity	Measured in a cell proliferation assay using PHA-stimulated human T lymphoblasts. The ED ₅₀ for this effect is 0.01-0.05 ng/mL. The specific activity of rHuIL-12 is approximately 1.1×10 ⁴ units/µg, which is calibrated against rHuIL-12 WHO Standard (NIBSC code: 95/544).
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 µg	100 µg	500 µg
Recombinant Human IL-12	10 µg	100 µg	500 µg

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Quality Control

Purity	> 97% by SDS-PAGE.
Endotoxin	Less than 1.0 EU/ μ g of rHuIL-12 as determined by LAL method.

Description

IL-12 is a heterodimeric cytokine of disulfide-linked p35 and p40 subunits. It is secreted by monocytes, macrophages, dendritic cells, neutrophils, Langerhans cells, keratinocytes, microglia, and peripheral B cells. In humans, the p40 subunit can also associate with a p19 subunit to form IL-23. IL-12 signals through a receptor complex consisting of IL-12 R beta 1 and IL-12 R beta 2. It promotes Th1 immune responses by inducing IFN-gamma secretion from NK cells, T cells, and macrophages and by enhancing NK cell and T cell mediated cytotoxicity. It also cooperates with IL-18 in the generation of Th1 memory cells.



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