

Recombinant Rat Interleukin-22 (Rat IL-22)

Product Information

Product Name	Cat#	Size
Recombinant Rat Interleukin-22 (Rat IL-22)	90179ES10	10 µg
	90179ES60	100 µg
	90179ES76	500 µg

Product Description

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF), was initially identified as a gene induced by IL-9 in mouse T cells and mast cells. It belongs to the IL-10-related cytokine family that consists of six members (IL-10, IL-19, IL-20, IL-22, IL-24/MDA-7, and IL-26/AK155). These proteins share structural homology and some degree of amino acid sequence homology to IL-10. Receptors for these proteins are members of the class II cytokine receptor family. The rat IL-22 coding region corresponding to amino acids 48-179 was deduced from a rat genomic clone (Genbank accession number AC111483). The N-terminal portion was cloned from rat adipocyte first strands using degenerate forward primers based on the human and mouse IL-22 amino acid sequences in two independent PCR reactions. Rat IL-22 cDNA predicts a 179 amino acid (aa) residue precursor protein with a putative 33 aa signal peptide that is cleaved to generate a 147 aa mature protein, which shares approximately 92% and 79% aa sequence identity with mouse and human IL-22, respectively. IL-22 signals through a heterodimeric receptor complex composed of the IL-22R (CRF2-9) subunit and the α chain of IL-10R (CRF2-4). In addition, IL-22 also binds to a secreted member of the class II cytokine receptor family called IL-22BP that acts as a natural IL-22 antagonist. IL-22 upregulates acute-phase reactants in the liver and hepatoma cells. In a rat hepatoma cell line, IL-22 has been shown to activate the Jak/STAT and MAPK signaling pathways.

Product Properties

Synonyms	Cytokine Zcyto 18, TIF
Accession	Q198B4
Unigene	Rn.195879.
Source	E.coli-derived Rat IL-22, Leu27-Val172.
Molecular Weight	Approximately 16.6 kDa.
AA Sequence	LPINSQCKLE AANFQQPYIV NRTFMLAKEA SLADNNTDVR LIGEELFRGV KAKDQCYLKMK QVLNFTLEDV LLPQSDRFQP YMQEVVPFLT KLSIHLSPCH ISGDDQNIQK NVRQLKETVQ KLGESGEIKA IGELDLLFMS LRNACV
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE and HPLC analyses.
Biological Activity	The ED ₅₀ as determined by inducing IL-10 secretion of human COLO 205 cells is less than 0.5 ng/mL, corresponding to a specific activity of > 2.0 × 10 ⁶ IU/mg. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.

Reconstitution

Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!