



Recombinant Rat IL-21

20200309DS



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	R20-036
Size:	10 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	365769
Synonyms:	IL21, Interleukin-21

IL-21 is a pleiotropic cytokine produced by CD4⁺ T cells in response to antigenic stimulation. Its action generally enhances antigen-specific responses of immune cells. The biological effects of IL-21 include: inducing the differentiation of T cell-stimulated B cells into plasma cells and memory B cells; the stimulation of IgG production in conjunction with IL-4; and the induction of apoptotic effects in naïve B cells and stimulated B cells in the absence of T cell signaling. Additionally, IL-21 promotes the anti-tumor activity of CD8⁺ T cells and NK cells. IL-21 exerts its effect through binding to a specific type I cytokine receptor, IL-21R, which also contains the γ chain (γ c) found in other cytokine receptors, including IL-2, IL-4, IL-7, IL-9 and IL-15. The IL-21/IL-21R interaction triggers a cascade of events, which includes activation of the tyrosine kinases JAK1 and JAK3, followed by activation of the transcription factors STAT1 and STAT3. Recombinant Rat IL-21 is a 15.3 kDa protein containing 130 amino acid residues.

Sequence

```
MHKSSPQRPD HLLIRLRHLM DIVEQLKIYE NDLDPPELLTA  
PQDVKGQCEH EAFACFQKAK LKPSNTGNNK TFINDLLAQL  
RRRLPAKRTG NKQRHMAKCP SCDLYEKKTP KEFLERLKWL  
LQKMIHQHLS
```

Database References

Protein RefSeq:	NP_001102413.1
Uniprot ID:	A3QPB9
mRNA RefSeq:	NM_001108943.2

Product Specifications

Expressed in	E. coli
Purity	≥ 98% by SDS-PAGE gel and HPLC analyses.
Endotoxin level	< 0.1 ng/µg of protein (<1EU/µg)
Formulation	lyophilized
Length (aa):	130
MW:	15.3 kDa



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by its ability to stimulate the proliferation of human ANBL-6 cells. The expected ED₅₀ is ≤ 0.5 ng/ml, corresponding to a specific activity of ≥ 2 x 10⁶ units/mg.