



## Interleukin-32 alpha, human recombinant (rHuIL-32a)

**Catalog No:** 08533  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** NK4, TAIF, TAIFa, TAIFb, TAIFc, TAIFd, IL-32beta, IL-32alpha, IL-32delta, IL-32gamma, Interleukin-32, IL-32, Natural killer cells protein 4, Tumor necrosis factor alpha-inducing factor, IL-32a, IL32a, IL32, Interleukin-32 alpha

### Background

IL-32 is part of the cytokine family and contains a tyrosine sulfation site, 3 potential N-myristoylation sites, multiple putative phosphorylation sites, and an RGD cell-attachment sequence. IL-32 expression is elevated after the activation of T-cells by mitogens or the activation of NK cells by IL-2. IL-32 induces the production of TNF- $\alpha$  from macrophage cells. IL-32 pro-inflammatory pathway is activated in response to influenza A virus infection. Dysregulation of IL-32 in myelodysplastic syndrome and chronic myelomonocytic leukemia modulates apoptosis and impairs NK function. Induction of TNF, IL-1 $\beta$ , and IL-6 by IL-32 is intervened by p38-MAPK. IL-32 induced monocyte-to-macrophage differentiation is mediated through nonapoptotic, caspase-3-dependent mechanisms. IL32 plays an important role in the pathogenesis of rheumatoid arthritis. IL-32 is involved in activation-induced cell death in T cells, through its intracellular actions. IL-32 is a cell-associated proinflammatory cytokine, which is particularly stimulated by mycobacteria through a caspase-1- and IL-18-dependent production of interferon gamma. IL-32 is associated with TNF- $\alpha$ , IL-1 $\beta$ , and IL-18. IL32 is involved in human rheumatoid arthritis and is a novel target in autoimmune diseases.

### Description

Interleukin-32 human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 131 amino acids and having a molecular mass of 14.9 kDa.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

IL-32 was lyophilized from a concentrated (1 mg/ml) solution in water containing 50 mM sodium phosphate buffer pH 7.5.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-32 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized IL-32, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-32 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

### Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

MCFPKVLSDD MKKLRKARMHQ AIERFYDKMQ NAESGRGQVM SSLAELEDDF KEGYLETVAAY YEEQHPPELT PLEKERDGL  
RCRGNRSPVP DVEDPATEEP GESFCDKSYG APRGDKEELT PQCCEPQSS K



**Activity**

Human IL-32 alpha activity is measured via the dose-dependent induction of TNF-alpha in the human THP-1 monocytic cell line.

**Usage**

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