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**Product Data Sheet**


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Product Name: IL 32A Human  
 Cat. No.: GP20643  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
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.		
Amino Acid Sequence	MCFPKVLSDD MKKLLKARMHQ AIERFYDKMQ NAESGRGQVM SSLAELEDDF KEGYLETVAA YYEEQHPELT PLLEKERDGL RCRGNRSPVP DVEDPATEEP GESFCDKSYG APRGDKEELT PQKCSEPQSS K.		
Solubility	It is recommended to reconstitute the lyophilized IL-32 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	IL-32 was lyophilized from a concentrated (1mg/ml) solution in water containing 50mM sodium Phosphate buffer pH=7.5.		

**Introduction**

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-α 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-1β, 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.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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IL-32 is a cell-associated proinflammatory cytokine, which is particularly stimulated by mycobacteria through a caspase-1- and IL-18-dependent production of IFN $\gamma$ . 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.

### Biological Activity

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

### Stability

Lyophilized IL32 although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution IL32 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . Please prevent freeze-thaw cycles.

### Background

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.

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