

Recombinant Human Interleukin-32 (rh IL-32 / IL-32a)

Synonyms: Natural killer cells protein 4 (NK4), Tumor necrosis factor alpha-inducing factor (TAIF)

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-1 β , 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- α , IL-1 β , 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.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

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

The aliquotes of 1 μ g and 2 μ g contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh IL-32 in sterile water not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IL-32 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh IL-32 should be stored at 4°C between 2-7days, for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Amino Acid Sequence: MCFPKVLSDD MKKCLKARMHQ AIERFYDKMQ NAESGRGQVM SSLAELEDDF KEGYLETVAAYEEQHPELT PLLEKERDGL RCRGNRSPVP DVEDPATEEP GESFCDKSYG APRGDKEELT PQCCEPQSS K.

Purity: Greater than 97.0% as determined by RP-HPLC and by SDS-PAGE.

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

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<i>small</i>	2 μ g	Cat.N°	11340322
<i>medium</i>	10 μ g	Cat.N°	11340323

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