

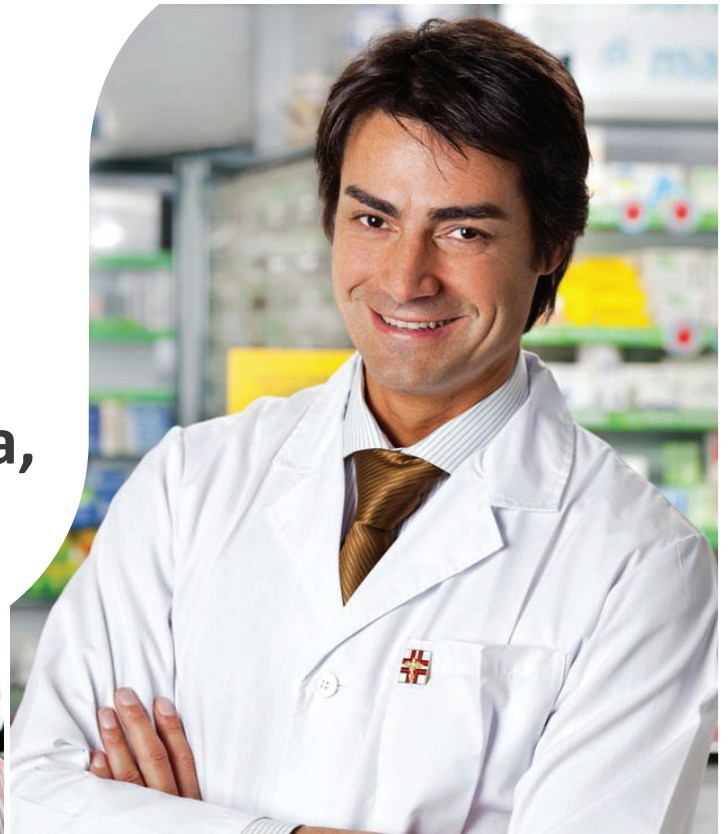


Sino Biological
Biological Solution Specialist

GMP Grade



**Recombinant Cytokines:
IL-18, EGF, IL21, TNF-alpha,
IL-1 beta**



IL-18, EGF, IL21, TNF-alpha, IL-1 beta

**High Quality | Premium Cytokines |
HPLC Validated | Tag-Free |
Low Endotoxin**

**for your CAT-T and CAR-NK Therapy Research
and Bioanalysis / Characterization**



- ISO9001 certified
- Cell based Bioactivity Assays
- Full set of Quality System
- Low Endotoxin Level
- Animal Free
- Carrier Free, Storage in PBS



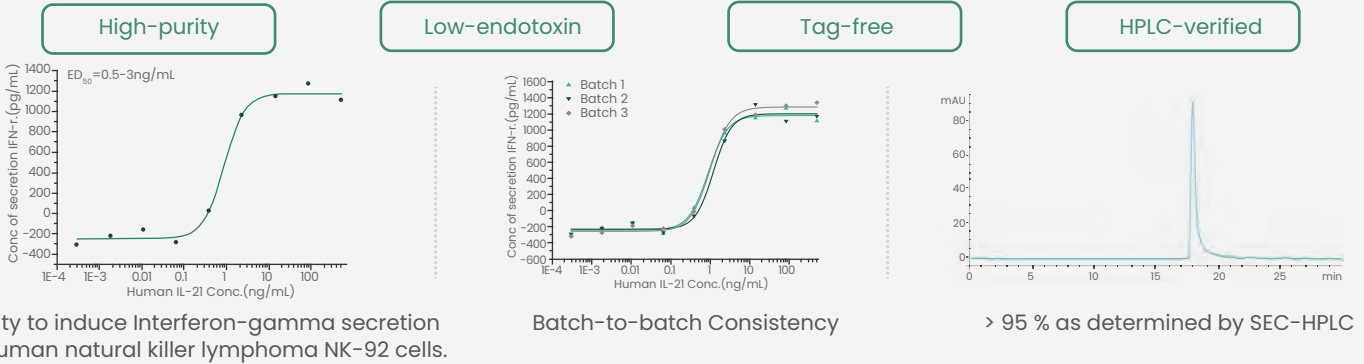


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IL-21: A Modulator in Allergy, Cancer, and Viral Infections

Interleukin 21 (IL-21) is an IL-2 family cytokine that strongly associated with inflammation and autoimmunity. It also exerts divergent effects on lymphoid cell leukemia and lymphomas. Clinical trials with IL-21 have yielded favorable results in cancer treatment, while the development of IL-21 inhibitors is in progress for treating autoimmune diseases. The biological functions of IL-21 are mediated via a heterodimeric receptor consisting of the IL-21R and the common γ -chain (γ c/CD132) receptor.

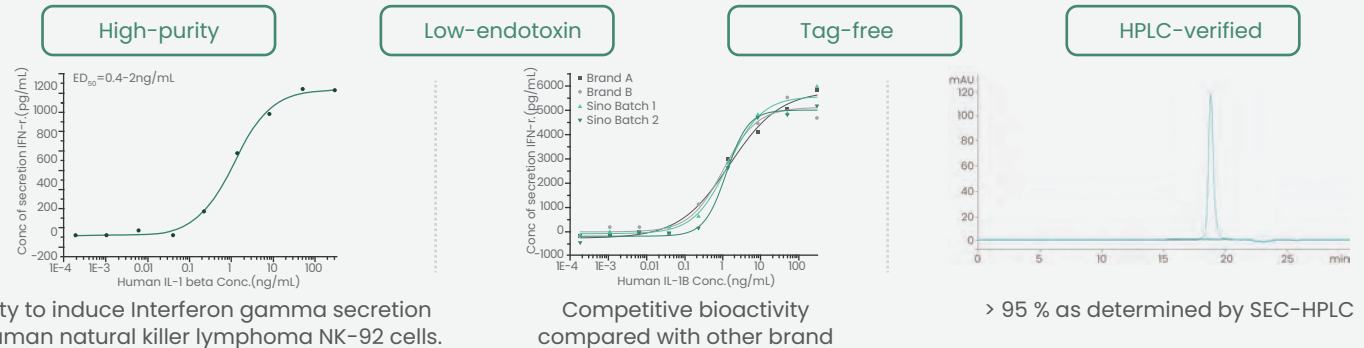
Human IL-21 Protein: 10584-HNAE



IL-1 beta Primes Innate Immunity

Interleukin-1 β (IL-1 β), along with IL-1 alpha and IL18, orchestrates the immune response through multiple downstream mechanisms. IL-1 beta transduces its signal through binding with the receptor IL1RI, which is complexed with the accessory protein IL1RACP. IL-1 beta signaling is negatively regulated by the decoy receptor IL1-RII and the receptor antagonist IL1RA.

Human IL-1 beta Protein: 10139-HNAE



TNF-alpha: A Master Pro-inflammatory Cytokine

Tumor Necrosis Factor-alpha (TNF- α) is a cytokine important in nearly all acute inflammatory reactions by acting as an amplifier of inflammation. TNF- α blockade has been used worldwide to treat inflammatory conditions, e.g., rheumatoid arthritis. Targeting TNF- α to treat cancer and cardiovascular diseases is also being evaluated in clinical trials.

Human TNF- α Protein: 10602-HNAE

