Animal-Free IL-22 Protein, Human (His)

Cat. No.:	HY-P700113AF
Synonyms:	rHuIL-22; Cytokine Zcyto 18; IL-TIF
Species:	Human
Source:	E. coli
Accession:	Q9GZX6 (A34-I179)
Gene ID:	50616
Molecular Weight:	Approximately 17.83 kDa

PROPERTIES

AA Sequence	M A P I S S H C R L D K S N F Q Q P Y I T N R T F M L A K E A S L A D N N T D V R L I G E K L F H G V S M S E R C Y L M K Q V L N F T L E E V L F P Q S D R F Q P Y M Q E V V P F L A R L S N R L S T C H I E G D D L H I Q R N V Q K L K D T V K K L G E S G E I K A I G E L D L L F M S L R N A C I
Biological Activity	Measure by its ability to induce proliferation in A549 cells. The ED_{50} for this effect is <0.5 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 μg of the protein by the LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	IL-22 Protein assumes a pivotal role in modulating tissue responses during inflammation, demonstrating a crucial involvement in the regeneration of epithelial cells to preserve barrier function following injury and forestall further tissue damage. Unlike most cytokines, IL-22 exerts no influence on immune cells, relying on a heterodimeric receptor comprising the specific IL22RA1 receptor, found on non-immune cells in various organs, and the shared subunit IL10RB. The binding of IL-22 to IL22RA1 activates the tyrosine kinases JAK1 and TYK2, subsequently triggering STAT3 activation. This, in turn, promotes cell survival and proliferation through the STAT3, ERK1/2, and PI3K/AKT pathways, contributing to the phosphorylation of GSK3B at 'Ser-9' and CTTN. Additionally, IL-22 fosters epithelial cell spreading.

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

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