

## Animal-Free IL-22 Protein, Mouse (His)

Cat. No.:	HY-P7079AF
Synonyms:	rMuIL-22; Cytokine Zcyto 18; IL-TIF
Species:	Mouse
Source:	E. coli
Accession:	Q9JJY9 (L34-V179)
Gene ID:	50929
Molecular Weight:	Approximately 17.58 kDa

### PROPERTIES

AA Sequence	<pre> M L P V N T R C K L   E V S N F Q Q P Y I   V 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 R G   V S A K D Q C Y L M   K Q V L N F T L E D   V L L P Q S D R F Q P Y M Q E V V P F L   T K L S N Q L S S C   H I S G D D Q N I Q   K N V R R L K E 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 V           </pre>
Biological Activity	Measure by its ability to induce IL-10 secretion in COLO205 cells. The ED <sub>50</sub> for this effect is <0.3 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4, trehalose.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	<p>IL-22 is a secreted IL-10 family cytokine that plays a critical role in modulating tissue responses during inflammation, reactive oxygen species metabolic process as well as the regeneration and spreading of epithelial cells<sup>[1][2][3][4]</sup>.</p> <p>IL-22 is produced by several T cells, ILC3, neutrophils and macrophages, IL-22 has a specific receptor which is composed of IL-22R1 and IL-10R2, presenting on non-immune cells in many organs. Ligation of IL22RA1 with IL22 induces activation of the tyrosine kinases JAK1 and TYK2, which activates STAT3, and p38 MAPK, in turn, promotes cell survival and proliferation through STAT3, ERK1/2, MAPK and PI3K/AKT pathways. IL-22 promotes phosphorylation of GSK3B at 'Ser-9' and CTTN as</p>
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well<sup>[5]</sup>.

IL-22 gets positive regulation from IL-23, IL-1 $\beta$ , IL-7, AhR and Notch, IL-22 gets negative regulation from IL-22BP, TGF- $\beta$ , IL-27, ICOS, c-Maf and IL-25<sup>[6]</sup>.

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

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