Data Sheet (Cat.No.TMPY-03490)

TargetMol

IL-22 Protein, Human, Recombinant

General Information

Synonyms:	IL-TIF;IL-22;interleukin 22;IL-D110;TIFa;TIFIL-23;ILTIF;zcyto18
Protein Construction:	A DNA sequence encoding human IL22(NP_065386.1) (Ala34-Ile179) was expressed with a N-terminal Met. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q9GZX6
Molecular Weight:	16.9 kDa (predicted); 15 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to induce IL-10 secretion in COLO 205 human colorectal adenocarcinoma cells. The ED50 for this effect is typically 0.3-1.2 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

IL22 is a member of a group of cytokines called the IL-1 family of IL-1 superfamily (including IL-19, IL-2, IL-24, and IL-26), a class of potent mediators of cellular inflammatory responses. It shares the use of IL-1R2 in cell signaling with other members of this family, IL-1, IL-26, IL-28A/B, and IL-29. IL22 is produced by activated DC and T cells and initiates innate immune responses against bacterial pathogens especially in epithelial cells such as respiratory and gut epithelial cells. IL22 along with IL-17 is rapidly produced by splenic LTi-like cells and can be also produced

by Th17 cells and likely plays a role in the coordinated response of both adaptive and innate immune systems. IL22 biological activity is initiated by binding to a cell-surface complex composed of IL-22R1 and IL-1R2 receptor chains and further regulated by interactions with a soluble binding protein, IL-22BP, which shares sequence similarity with an extracellular region of IL-22R1 (SIL-22R1). IL22 and IL-1 receptor chains play a role in cellular targeting and signal transduction to selectively initiate and regulate immune responses. IL22 can contribute to immune disease through the stimulation of inflammatory responses, S1s, and defensins. IL22 also promotes hepatocyte survival in the liver and epithelial cells in the lung and gut similar to IL-1. In some contexts, the pro-inflammatory versus tissue-protective functions of IL22 are regulated by the often co-expressed cytokine IL-17A.

Reference

Pestka S. et al., 2004, Annu Rev Immunol. 22: 929-79.
Xie MH. et al., 2000, J Biol Chem. 275 (40): 31335-9.
Jones BC. et al., 2008, Structure. 16 (9): 1333-44.

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