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IL-22

Catalog # PVGS1253

Product Information

Primary Accession	Q9GZX6
Species	Human
Sequence	Ala34-Ile179
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	Measured by its ability to induce IL-10 secretion in COLO 205 (human colon carcinoma cells). The ED_{50} for this effect is less than 0.3 ng/ml.
Expression System	HEK 293
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 □g/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	50616
Other Names	Interleukin-22, IL-22, Cytokine Zcyto18, IL-10-related T-cell-derived-inducible factor, IL-TIF, IL22, ILTIF, ZCYTO18
Target Background	Interleukin-22(IL-22) belongs to a group of cytokines called the IL-10 family or IL-10 superfamily (including IL-19, IL-20, IL-24, and IL-26) which are a class of potent mediators of cellular inflammatory responses. It shares use of IL-10R2 in cell signaling with other members of this family, such as IL-10, IL-26, IL-28A/B and IL-29. IL-22 is produced by activated DC and T cells and initiates innate immune responses against bacterial pathogens in epithelial cells such as those in the lung and gut. IL-22 along with IL-17 is produced by splenic LTi-like cells and Th17 cells and likely plays a role in the coordinated response of both adaptive and innate immune systems.IL-22 signals through a receptor system consisting of IL-10R-β/CRF2-4 and IL-22R, both of which are members of the class II cytokine-receptor family.

Protein Information

Name	IL22
Synonyms	ILTIF, ZCYTO18
Function	Cytokine that plays a critical role in modulating tissue responses during inflammation (PubMed:17204547). Plays an essential role in the regeneration of epithelial cells to maintain barrier function after injury and for the prevention of further tissue damage (PubMed:17204547). Unlike most of the cytokines, has no effect on immune cells. Signals through a heterodimeric receptor composed of two subunits, the specific receptor IL22RA1 which is present on non-immune cells in many organs and the shared subunit IL10RB (PubMed:10875937, PubMed:18599299). Ligation of IL22RA1 with IL22 induces activation of the tyrosine kinases JAK1 and TYK2, which in turn activates STAT3. In turn, promotes cell survival and proliferation through STAT3, ERK1/2 and PI3K/AKT pathways (PubMed:25793261, PubMed:31311100). Promotes phosphorylation of GSK3B at 'Ser-9' and CTTN (By similarity). Promotes epithelial cell spreading (By similarity).
Cellular Location	Secreted.