

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived human IL-22 protein
Ala34-Ile179
Accession # Q9GZX6.1

N-terminal Sequence Analysis Ala34

Predicted Molecular Mass 17 kDa

SPECIFICATIONS

SDS-PAGE 28-32 kDa, under reducing conditions.

Activity Measured by its ability to induce IL-10 secretion in COLO 205 human colorectal adenocarcinoma cells. Nagalakshmi, M.L. *et al.* (2004) International Immunopharmacology 4:679.
The ED₅₀ for this effect is 0.160-1.60 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute the 10 µg size at 100 µg/mL in PBS. Reconstitute all other sizes at 500 µg/mL in PBS.

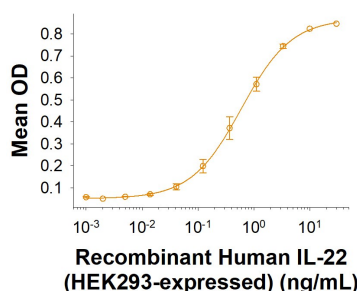
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

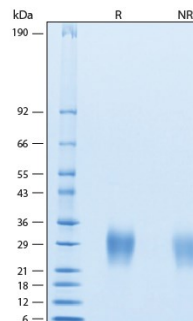
DATA

Bioactivity



Recombinant Human IL-22 (HEK293-expressed) Protein Bioactivity. Measured by its ability to induce IL-10 secretion in COLO 205 human colorectal adenocarcinoma cells. Nagalakshmi, M.L. *et al.* (2004) International Immunopharmacology 4:679. The ED₅₀ for this effect is 0.160-1.60 ng/mL.

SDS-PAGE



Recombinant Human IL-22 (HEK293-expressed) Protein SDS-PAGE. 2 µg/lane of Recombinant Human IL-22 (HEK293-expressed) Protein (Catalog # 11311-IL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 28-32 kDa.

BACKGROUND

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF) was initially identified as a gene induced by IL-9 in mouse T cells and mast cells. Human IL-22 cDNA encodes a 179 amino acid (aa) residue protein with a putative 33 aa signal peptide that is cleaved to generate a 147 aa mature protein that shares approximately 79% and 22% aa sequence identity with mouse IL-22 and human IL-10, respectively. The human IL-22 gene is localized to chromosome 12q15. Although it exists as a single copy gene in human and in many mouse strains, the mouse IL-22 gene is duplicated in some mouse strains including C57B1/6, FVB and 129. The two mouse genes designated IL-TIFα and IL-TIFβ, share greater than 98% sequence homology in their coding region. IL-22 has been shown to activate STAT-1 and STAT-3 in several hepatoma cell lines and upregulate the production of acute phase proteins. IL-22 is produced by normal T cells upon anti-CD3 stimulation in humans. Mouse IL-22 expression is also induced in various organs upon lipopolysaccharide injection, suggesting that IL-22 may be involved in inflammatory responses. The functional IL-22 receptor complex consists of two receptor subunits, IL-22R (previously an orphan receptor named CRF2-9) and IL-10Rβ (previously known as CRF2-4), belonging to the class II cytokine receptor family.

References:

1. Dumoutier, L. *et al.* (2000) J. Immunol. **164**:1814.
2. Xie, M-H. *et al.* (2000) J. Biol. Chem. **275**:31335.
3. Dumoutier, L. *et al.* (2000) PNAS **97**:10144.
4. Kotenko, S.V. *et al.* (2001) J. Biol. Chem. **276**:2725.