Recombinant Human IL-22 Avi-tag

Catalog Number: AVI11311

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human IL-22 protein

N-terminal Sequence Analysis	Gly of GG Avi-tag
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	19 kDa

SPECIFICATIONS

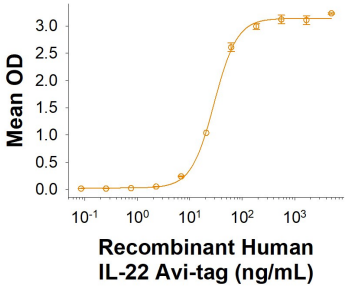
SDS-PAGE	25-31 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human IL-22 Avi-tag (Catalog # AVI11311) binds Recombinant Human IL-22BP (Catalog # 8498-BP/CF) with an ED_{50} of 10.0-120 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 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.

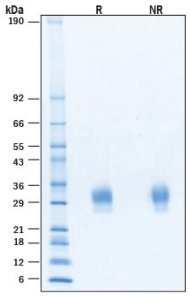
DATA

Binding Activity



Recombinant Human IL-22 Avi-tag Protein Binding Activity. Recombinant Human IL-22 Avi-tag Protein (Catalog # AVI11311) binds Recombinant Human IL-22BP (Catalog # 8498-BP/CF) with an ED_{50} of 10.0-120 ng/mL.

SDS-PAGE



Recombinant Human IL-22 Avi-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human IL-22 Avi-tag Protein (Catalog # AVI11311) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 25-31 kDa, under reducing conditions.

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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. Our Avi-tag Biotinylated human IL-22 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

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.

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