Catalog # ILP-H5222



## Synonym

IL18BP,IL18BPa,Tadekinig-alfa

## Source

Human IL-18BP, His Tag(ILP-H5222) is expressed from human 293 cells (HEK293). It contains AA Thr 31 - Gly 194 (Accession # <u>NP\_001138529</u>). Predicted N-terminus: Thr 31

# **Molecular Characterization**

IL-18BP(Thr 31 - Gly 194) NP\_001138529 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 18.5 kDa. The protein migrates as 35-45 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

#### Storage

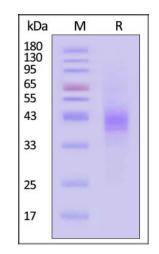
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

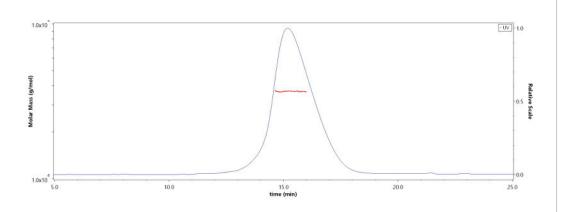
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## **SDS-PAGE**



Human IL-18BP, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With <u>Star Ribbon Pre-stained Protein Marker</u>).

# SEC-MALS



The purity of Human IL-18BP, His Tag (Cat. No. ILP-H5222) is more than 90% and the molecular weight of this protein is around 32-45 kDa verified by SEC-MALS.



**Bioactivity-SPR** 

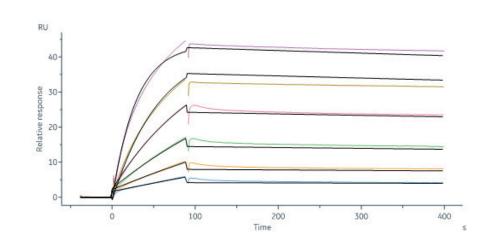






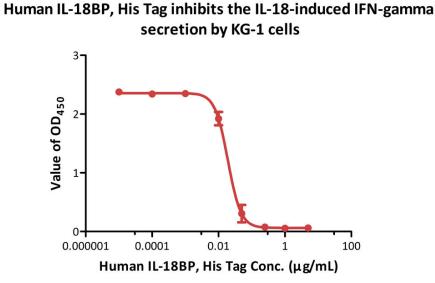


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Human IL-18 Protein, premium grade (Cat. No. IL8-H5114) immobilized on CM5 Chip can bind Human IL-18BP, His Tag (Cat. No. ILP-H5222) with an affinity constant of 0.319 nM as determined in a SPR assay (Biacore 8K) (QC tested).

## **Bioactivity-Bioactivity CELL BASE**



Human IL-18BP, His Tag (Cat. No. ILP-H5222) inhibits the IL-18-induced IFN-gamma secretion by KG-1 cells. The ED50 for this effect is 0.019-0.053  $\mu$ g/mL in the presence of 30 ng/mL of Recombinant Human IL-18 (Routinely tested).

# Background

Interleukin-18-binding protein (IL18BP) is also known as Tadekinig-alfa, IL18BPa, which functions as an IL18 inhibitor. IL18BP is a secreted protein which contains one Ig-like C2-type (immunoglobulin-like) domain. IL18BP does not have a transmembrane domain and hence is not anchored to the cell membrane. IL18BP is strongly expressed in heart, lung, placenta and spleen. Isoform A of IL18BP binds to IL-18 and inhibits its activity. IL18BP also functions as an inhibitor of the early TH1 cytokine response. IL18BP suppresses the production of IFN-gamma resulting in reduced T-helper type 1 immune responses.

## **Clinical and Translational Updates**



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