

# Human ALPI Protein; His Tag

## Product Information

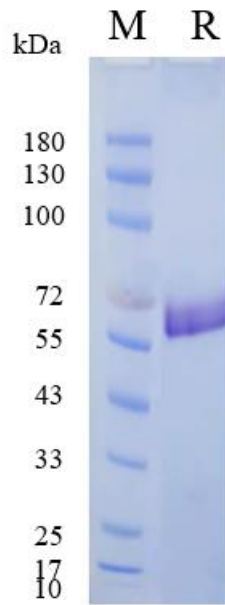
<b>Product Name</b>	Human ALPI Protein; His Tag
<b>Storage temp.</b>	Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
<b>Catalog# / Size</b>	<b>GM-84419RP-100 / 100 <math>\mu\text{g}</math></b> <b>GM-84419RP-1000 / 1 mg</b>

## Protein Information

<b>Alternative Names</b>	IAP
<b>Source</b>	Human ALPI Protein; His Tag (GM-84419RP) is expressed from human 293 cells (HEK-293). It contains AA Val20-Asp503 (Accession # P09923-1). This protein carries a His tag at the C-terminus.
<b>Purity</b>	> 95% as determined by SDS-PAGE
<b>Endotoxin</b>	< 1 EU/ $\mu\text{g}$ , determined by LAL gel clotting assay
<b>Predicted Mol Mass</b>	54.3 KDa
<b>Formulation</b>	Supplied as a 0.2 $\mu\text{m}$ filtered solution of PBS, pH7.4.
<b>Description</b>	Intestinal alkaline phosphatase (ALPI) is an enzyme primarily encoded by the ALPI gene in the human body. This enzyme is mainly present in the small intestine and the liver, and can also be found in other tissues, although in smaller amounts. The main function of intestinal alkaline phosphatase in the small intestine is to assist in the digestion and absorption of phosphates and fats from food. Additionally, it is used as one of the clinical diagnostic markers for detecting intestinal diseases or bone disorders. Research on ALPI in human diseases also suggests that it may play a role in certain intestinal diseases and inflammatory processes. The gene responsible for IAP is mapped on the long arm of chromosome 2. IAP is a heat stable isozyme and more active at pH 9.7. Unlike other AP's the side chain of IAP lacks terminal sialic acid residues. IAP is essential for lipids absorption and is involved in reducing inflammation. IAP suppresses inflammation, particularly by modifying the gut microflora and dephosphorylating LPS. Any alteration in IAP expression and activity increases the vulnerability to inflammation. Inflammatory bowel disease (IBD) is an indication of a condition where the patient's endogenous IAP production and activity are reduced. Exogenous IAP injection may be a good option for treating IBD and other disorders caused by the disruption of gut microbiota.

Version:3.3 Revision Date:25/12/2023

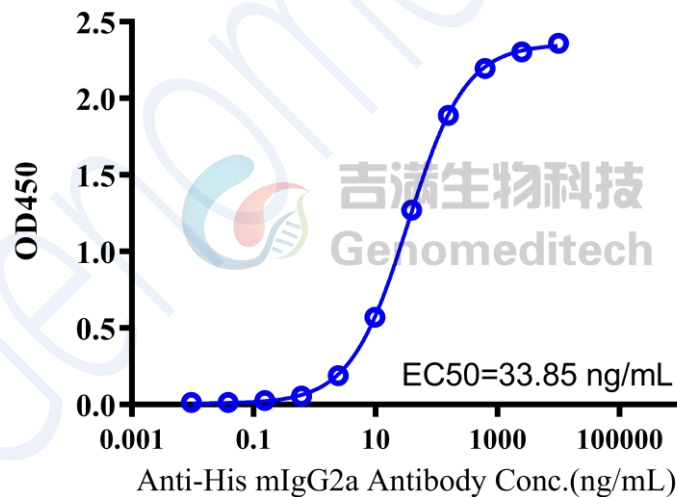
## SDS-PAGE



On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

## Bioactivity-ELISA

### Human ALPI Protein; His Tag ELISA 0.1 $\mu\text{g}$ Human ALPI Protein; His Tag of per well



Human ALPI Protein; His Tag (Catalog # GM-84419RP) was immobilized at 1  $\mu\text{g}/\text{ml}$  (100  $\mu\text{L}/\text{well}$ ). Increasing concentrations of Anti-His mIgG2a Antibody (Catalog # GM-59493AB) were added.