

# Recombinant Human GBP1 Protein (His Tag)

Catalog Number:PKSH030815



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

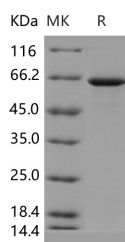
## Description

<b>Synonyms</b>	GBP1
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Cys 589
<b>Accession</b>	AAA35871.1
<b>Calculated Molecular Weight</b>	69.0 kDa
<b>Observed molecular weight</b>	65 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



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## Background

Guanylate-binding protein 1 (GBP-1) is a member of the GBP family whose members are GTPases induced in response to interferon- $\lambda$  (IFN- $\lambda$ ), with seven highly homologous members in humans, termed HuGBP-1 to HuGBP-7. GBP-1 expression is induced by type1 and type2 interferons, including IFN- $\lambda$  and also by interleukin-1 $\beta$  (IL-1 $\beta$ ), IL-1 $\alpha$ , and tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ). GBP-1 is key to the protective immunity against microbial and viral pathogens. GBP-1 was only secreted from endothelial cells. Secretion occurred without the presence of a leader peptide. Secretion procession is a nonclassical, likely ABC transporter-dependent, pathway and independent of GBP-1 GTPase activity and isoprenylation, and did not require additional interferon- $\lambda$ -induced factors. Clinically most important was the detection of significantly increased GBP-1 concentrations in the cerebrospinal fluid of patients with bacterial meningitis as compared

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