## **Recombinant Human GBP1 Protein (His Tag)**

Catalog Number: PKSH030815



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

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Synonyms GBP1
Species Human

Expression Host

Sequence

Met 1-Cys 589

Accession

AAA35871.1

Calculated Molecular Weight

Observed molecular weight

Tag

HEK293 Cells

Met 1-Cys 589

AAA35871.1

69.0 kDa

65 kDa

C-His

### **Properties**

**Purity** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage** 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.

**Shipping** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation** Lyophilized from sterile PBS, pH 7.4

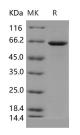
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



> 95 % as determined by reducing SDS-PAGE.

## **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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