

## GBP1 Protein, Human (HEK293, His)

Cat. No.:	HY-P75172
Synonyms:	Guanylate-binding protein 1; GBP-1; HuGBP-1
Species:	Human
Source:	HEK293
Accession:	AAA35871.1 (M1-C589)
Gene ID:	2633
Molecular Weight:	Approximately 65 kDa

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	Guanylate-binding protein 1 (GBP1) belongs to the dynamin superfamily of large GTPases. GBP1 plays important roles in innate immunity against a diverse range of bacterial, viral and protozoan pathogens. It hydrolyzes GTP to GMP in two consecutive cleavage reactions: GTP is first hydrolyzed to GDP and then to GMP in a processive manner. Following infection, GBP1 is recruited to the pathogen-containing vacuoles or vacuole-escaped bacteria and promotes both autophagy and inflammasome assembly. GBP1 also acts as a positive regulator of inflammasome assembly by promoting the release of inflammasome ligands from bacteria. GBP1 confers protection to several pathogens, including the bacterial pathogens <i>L.monocytogenes</i> and <i>M.bovis</i> BCG as well as the protozoan pathogen <i>T.gondii</i> . In addition, it exhibits antiviral activity against influenza virus <sup>[1][2]</sup> .
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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