Data Sheet (Cat.No.TMPY-03122)

TargetMol

GBP2 Protein, Human, Recombinant (His)

General Information

Synonyms:	guanylate binding protein 2;GBP2
Protein Construction:	A DNA sequence encoding the human GBP2 (AAH73163.1) (Met1-Cys588) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH73163.1
Molecular Weight:	68.3 kDa (predicted); 62 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

GBP-2 belongs to the guanylate-binding protein (GBP) family. GBPs are characterized by their ability to specifically bind guanine nucleotides (GMP, GDP, and GTP). As GTPases induced by IFN-gamma (Interferon-inducible GTPase), they are key to the protective immunity against microbial and viral pathogens. GBP-2 is a GTPase that converts GTP to GDP and GMP. It binds GTP, GDP and GMP. GBP-2 hydrolyzes GTP very efficiently. GDP rather than GMP is the major reaction product. GBP-2 is induced by interferons that have antiviral effects and inhibit tumor cell

proliferation.

Reference

Strausberg RL,et al.(2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc Natl Acad Sci. 99(26):16899-903.
Wistow G,et al.(2002) Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: over 6000 non-redundant transcripts, novel genes and splice variants. Mol Vis. 8:205-20.
Neun R,et al.(1996) GTPase properties of the interferon-induced human guanylate-binding protein 2. FEBS Lett. 390(1):69-72.

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