

Recombinant Human HSPA5 Protein, GST-tagged

Cat. No. HSPA5-968H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HSPA5 Protein (Glu19-Leu654) with GST tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Glu19-Leu654
Description	The protein encoded by this gene is a member of the heat shock protein 70 (HSP70) family. This protein localizes to the lumen of the endoplasmic reticulum (ER) where it operates as a typical HSP70 chaperone involved in the folding and assembly of proteins in the ER and is a master regulator of ER homeostasis. During cellular stress, as during viral infection or tumorigenesis, this protein interacts with the transmembrane stress sensor proteins PERK (protein kinase R-like endoplasmic reticulum kinase), IRE1 (inositol-requiring kinase 1), and ATF6 (activating transcription factor 6) where it acts as a repressor of the unfolded protein response (UPR) and also plays a role in cellular apoptosis and senescence. Elevated expression and atypical translocation of this protein to the cell surface has been reported in viral infections and some types of cancer cells. At the cell surface this protein may facilitate viral attachment and entry to host cells. This gene is a therapeutic target for the treatment of coronavirus diseases and chemoresistant cancers.

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Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 96.5 kDa; Accurate Molecular Mass: 96 kDa
Purity	> 90%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	HSPA5 heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) [Homo sapiens (human)]
Official Symbol	HSPA5
Synonyms	HSPA5; heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa); GRP78, heat shock 70kD protein 5 (glucose regulated protein, 78kD); 78 kDa glucose-

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regulated protein; BiP; immunoglobulin heavy chain-binding protein; endoplasmic reticulum lumenal Ca(2+)-binding protein grp78; BIP; MIF2; GRP78; FLJ26106;

Gene ID [3309](#)

mRNA Refseq [NM_005347](#)

Protein Refseq [NP_005338](#)

MIM [138120](#)

UniProt ID [P11021](#)

