78 Kda Glucose-Regulated (HSPA5) ELISA Kit for Human

PRODUCT OVERVIEW

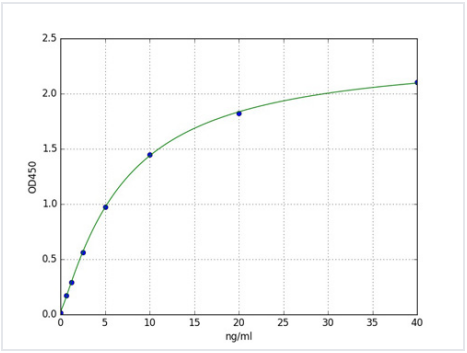
Product Name	78 kDa glucose-regulated protein (HSPA5), ELISA Kit
Full Product Name	Human 78 kDa glucose-regulated protein ELISA Kit
Product Gene Name	HSPA5 elisa kit
Product Synonym Names	GRP78 (Glucose Regulated Protein 78)/HSPA5/BIP/GRP-78/HSP70-5/MIF2/78 kDa glucose-regulated protein/Endoplasmic reticulum lumenal Ca (2+)-binding protein grp78/Heat shock 70 kDa protein 5/heat shock 70kD protein 5 (glucose-regulated protein; 78kD)/Immunoglobulin heavy chain-binding protein
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.625-40ng/ml
Sensitivity	0.375ng/ml
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Molecular Weight	72,333 Da
OMIM	138120
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for HSPA5 elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-Human HSPA5 antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human HSPA5 antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human HSPA5 amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human HSPA5 can be calculated.
Other Notes	Small volumes of HSPA5 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HSPA5 purchase	MBS764299 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the 78 kDa glucose-regulated protein (HSPA5) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing HSPA5. The ELISA analytical biochemical technique of the MBS764299 kit is based on HSPA5 antibody-HSPA5 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect HSPA5 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, HSPA5. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

Typical Data & Standard Curve

Results of a typical standard run of a Human HSPA5 ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	ng/ml	0	0.625	1.25	2.5	5	10	20	40
Y	OD450	0.064	0.137	0.209	0.356	0.652	1.132	1.934	2.581

Typical Testing Data of HSPA5 elisa kit



Typical Standard Curve of HSPA5 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HSPA5. It may not necessarily be applicable to this product.

NCBI GI #	16507237
NCBI GeneID	3309
NCBI Accession #	NP_005338.1
UniProt Secondary Accession #	Q2EF78; Q9NPF1; Q9UK02; B0QZ61
UniProt Related Accession #	P11021
GenBank Nucleotide #	NM_005347.4
NCBI Official Full Name	78 kDa glucose-regulated protein
NCBI Official Synonym Full Names	heat shock protein family A (Hsp70) member 5
NCBI Official Symbol	HSPA5
NCBI Official Synonym Symbols	BIP; MIF2; GRP78; HEL-S-89n
UniProt Protein Name	78 kDa glucose-regulated protein
UniProt Synonym Protein Names	Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78; Heat shock 70 kDa protein 5; Immunoglobulin heavy chain-binding protein; BiP
Protein Family	78 kDa glucose-regulated protein
UniProt Gene Name	HSPA5
UniProt Synonym Gene Names	GRP78; GRP-78; BiP
UniProt Entry Name	GRP78_HUMAN
NCBI Protein Information	78 kDa glucose-regulated protein
NCBI Summary for HSPA5	The protein encoded by this gene is a member of the heat shock protein 70 (HSP70) family. It is localized in the lumen of the endoplasmic reticulum (ER), and is involved in the folding and assembly of proteins in the ER. As this protein interacts with many ER proteins, it may play a key role in monitoring protein transport through the cell.[provided by RefSeq, Sep 2010]

UniProt Comments for HSPA5	GRP78: a member of the HSP family of molecular chaperones required for endoplasmic reticulum integrity and stress-induced autophagy. Plays a central role in regulating the unfolded protein response (UPR), and is an obligatory component of autophagy in mammalian cells. May play an important role in cellular adaptation and oncogenic survival. One of the client proteins of GRP78 is protein double-stranded RNA-activated protein-like endoplasmic reticulum kinase (PERK). Probably plays a role in facilitating the assembly of multimeric protein complexes inside the ER. Protein type: Chaperone; Heat shock protein Chromosomal Location of Human Ortholog: 9q33.3 Cellular Component: cell surface; endoplasmic reticulum; endoplasmic reticulum lumen; endoplasmic reticulum membrane; ER-Golgi intermediate compartment; focal adhesion; integral to endoplasmic reticulum membrane; melanosome; membrane; midbody; mitochondrion; myelin sheath; nucleus; plasma membrane; signalosome; smooth endoplasmic reticulum Molecular Function: ATP binding; ATPase activity; calcium ion binding; chaperone binding; enzyme binding; glycoprotein binding; misfolded protein binding; protein binding; protein domain specific binding; ribosome binding; ubiquitin protein ligase binding; unfolded protein binding Biological Process: blood coagulation; cellular protein metabolic process; cellular response to glucose starvation; cerebellar Purkinje cell layer development; cerebellum structural organization; ER overload response; ER-associated protein catabolic process; negative regulation of apoptosis; negative regulation of transforming growth factor beta receptor signaling pathway; platelet activation; platelet degranulation; positive regulation of cell migration; positive regulation of protein ubiquitination; substantia nigra development; unfolded protein response; unfolded protein response, activation of signaling protein activity
Research Articles on HSPA5	**1.** Up-regulation of BiP is associated with Pancreatic Neuroendocrine Tumors.
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