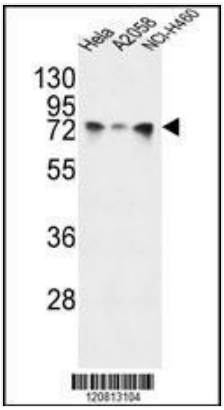
HSPA5 Antibody – Rabbit Polyclonal

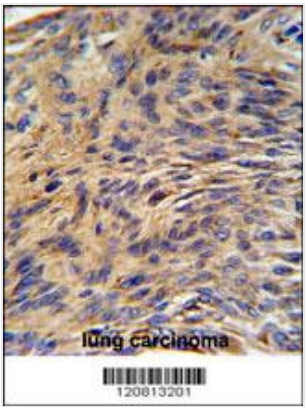
PRODUCT OVERVIEW

Product Name	HSPA5, Polyclonal Antibody
Full Product Name	HSPA5, ID (HSPA5, GRP78, 78kD glucose-regulated protein, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70kD protein 5, Immunoglobulin heavy chain-binding protein) (Azide free) (HRP)
Product Gene Name	anti-HSPA5 antibody
Product Synonym Names	HSPA5; GRP78; 78kD glucose-regulated protein; Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78; Heat shock 70kD protein 5; Immunoglobulin heavy chain-binding protein
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Horseradish Peroxidase (HRP).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	72,333 Da
Chromosome Location	Chromosome: 9; NC_000009.11 (127997127..128003666, complement). Location: 9q33.3
OMIM	138120
3D Structure	ModBase 3D Structure for P11021
Immunogen	HSPA5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 270-300 amino acids from the Central region of human HSPA5.
Conjugate	HRP
Note	Preservative Free
Product Categories/Family for anti-HSPA5 antibody	Antibodies; Heat Shock Proteins
Applications Tested/Suitable for anti-HSPA5 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-HSPA5 antibody	IHC: 1:50-100 ELISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-HSPA5 antibody	When Chinese hamster K12 cells are starved of glucose, the synthesis of several proteins, called glucose-regulated proteins (GRPs), is markedly increased. Hendershot et al. (1994) [PubMed 8020977] pointed out that one of these, GRP78 (HSPA5), also referred to as 'immunoglobulin heavy chain-binding protein' (BiP), is a member of the heat-shock protein-70 (HSP70) family and is involved in the folding and assembly of proteins in the endoplasmic reticulum (ER). Because so many ER proteins interact transiently with GRP78, it may play a key role in monitoring protein transport through the cell.

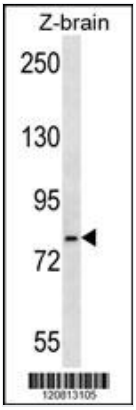
Product References and Citations for anti-HSPA5 antibody	Zhao, C., et al. J. Med. Virol. 82(1):14-22(2010). Zhuang, L., et al. Mod. Pathol. 23(1):45-53(2010). Arnaudeau, S., et al. Proteomics 9(23):5316-5327(2009).
Other Notes	Small volumes of anti-HSPA5 antibody vial(s) may occasionally become entrapped 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	MBS6308676 is an antibody targeting HSPA5. Also known as HSPA5, ID (HSPA5, GRP78, 78kD glucose-regulated protein, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70kD protein 5, Immunoglobulin heavy chain-binding protein) (Azide free) (HRP). Reactive in Human. Host: Rabbit.



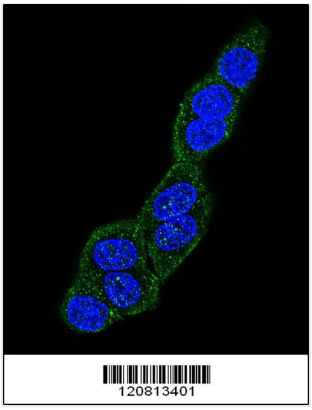
Western Blot (WB) of anti-HSPA5 antibody
HSPA5 Antibody (Center) western blot analysis in Hela,A2058,NCI-H460 cell line lysates (35ug/lane).This demonstrates the HSPA5 antibody detected the HSPA5 protein (arrow).



Immunohistochemistry (IHC) of anti-HSPA5 antibody
HSPA5 Antibody (Center) IHC analysis in formalin fixed and paraffin embedded human lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the HSPA5 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Western Blot (WB) of anti-HSPA5 antibody
HSPA5 Antibody (Center) western blot analysis in zebra fish brain tissue lysates (35ug/lane).This demonstrates the HSPA5 antibody detected the HSPA5 protein (arrow).



Immunofluorescence (IF) of anti-HSPA5 antibody
Confocal immunofluorescent analysis of HSPA5 Antibody (Center) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).DAPI was used to stain the cell nuclear (blue).

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 Primary Accession #	P11021
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 70kDa protein 5 (glucose-regulated protein, 78kDa)
NCBI Official Symbol	HSPA5
NCBI Official Synonym Symbols	BIP; MIF2; GRP78
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
Protein Family	Transmembrane 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; immunoglobulin heavy chain-binding protein; endoplasmic reticulum lumenal Ca(2+)-binding protein grp78
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: Heat shock protein; Chaperone Chromosomal Location of Human Ortholog: 9q33.3 Cellular Component: signalosome; endoplasmic reticulum membrane; cell surface; focal adhesion; smooth endoplasmic reticulum; mitochondrion; endoplasmic reticulum; endoplasmic reticulum lumen; ER-Golgi intermediate compartment; membrane; melanosome; plasma membrane; integral to endoplasmic reticulum membrane; midbody; nucleus Molecular Function: protein domain specific binding; protein binding; enzyme binding; ubiquitin protein ligase binding; chaperone binding; ATPase activity; unfolded protein binding; ribosome binding; misfolded protein binding; calcium ion binding; glycoprotein binding; ATP binding Biological Process: platelet activation; ER-associated protein catabolic process; cerebellum structural organization; unfolded protein response; cerebellar Purkinje cell layer development; cellular response to glucose starvation; platelet degranulation; substantia nigra development; unfolded protein response, activation of signaling protein activity; cellular protein metabolic process; positive regulation of protein ubiquitination; negative regulation of transforming growth factor beta receptor signaling pathway; blood coagulation; ER overload response; positive regulation of cell migration; negative regulation of apoptosis
Research Articles on HSPA5	**1.** GRP78 is an important mediator in Endometrial Cancer (EC) cell survival and is associated with malignant disease. Furthermore, GRP78 contributes to cisplatin resistance, a critical aspect of disease progression in EC.
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