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HSPA5 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8572b

Specification

HSPA5 Antibody - Product Information

Application	**WB,E**
Primary Accession	P11021
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG1,k**
Calculated MW	**72333**

HSPA5 Antibody - Additional Information

Gene ID 3309

Other Names
78 kDa glucose-regulated protein, GRP-78, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70 kDa protein 5, Immunoglobulin heavy chain-binding protein, BiP, HSPA5, GRP78

Target/Specificity
This HSPA5 antibody is generated from a mouse immunized with a recombinant protein between 420-654 amino acids from human HSPA5.

Dilution
WB~~1:20000

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HSPA5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

HSPA5 Antibody - Protein Information

Name HSPA5 (HGNC:5238)

Function Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen (PubMed:2294010, PubMed:23769672, PubMed:23990668, PubMed:28332555). Involved in the correct folding of proteins and degradation

of misfolded proteins via its interaction with DNAJC10/ERdj5, probably to facilitate the release of DNAJC10/ERdj5 from its substrate (By similarity). Acts as a key repressor of the EIF2AK3/PERK and ERN1/IRE1- mediated unfolded protein response (UPR) (PubMed:1550958, PubMed:11907036, PubMed:19538957). In the unstressed endoplasmic reticulum, recruited by DNAJB9/ERdj4 to the luminal region of ERN1/IRE1, leading to disrupt the dimerization of ERN1/IRE1, thereby inactivating ERN1/IRE1 (By similarity). Also binds and inactivates EIF2AK3/PERK in unstressed cells (PubMed:11907036). Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP from ERN1/IRE1 and EIF2AK3/PERK, allowing their homodimerization and subsequent activation (PubMed:11907036). Plays an auxiliary role in post-translational transport of small presecretory proteins across endoplasmic reticulum (ER). May function as an allosteric modulator for SEC61 channel-forming translocon complex, likely cooperating with SEC62 to enable the productive insertion of these precursors into SEC61 channel. Appears to specifically regulate translocation of precursors having inhibitory residues in their mature region that weaken channel gating. May also play a role in apoptosis and cell proliferation (PubMed:26045166).

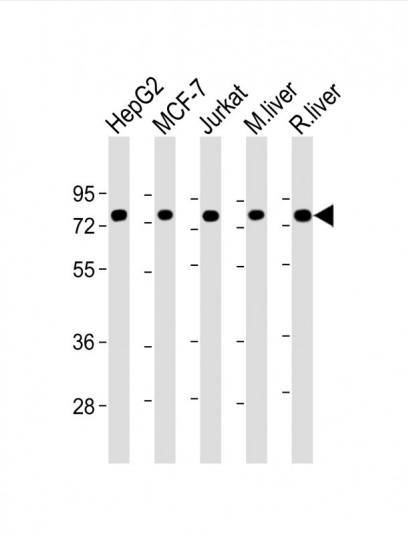
Cellular Location
Endoplasmic reticulum lumen. Melanosome. Cytoplasm {ECO:0000250|UniProtKB:P20029}. Cell surface Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:12643545). Localizes to the cell surface of epithelial cells in response to high levels of free iron (PubMed:20484814, PubMed:24355926, PubMed:27159390)

HSPA5 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HSPA5 Antibody - Images



All lanes : Anti-HSPA5 Antibody at 1:20000 dilution Lane 1: HepG2 whole cell lysate Lane 2:

MCF-7 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: mouse liver lysate Lane 5: rat liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 72 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

HSPA5 Antibody - Background

Probably plays a role in facilitating the assembly of multimeric protein complexes inside the endoplasmic reticulum. Involved in the correct folding of proteins and degradation of misfolded proteins via its interaction with DNAJC10, probably to facilitate the release of DNAJC10 from its substrate.

HSPA5 Antibody - References

Ting J.,et al.DNA 7:275-286(1988).
Chao C.C.K.,et al.Submitted (DEC-1995) to the EMBL/GenBank/DDBJ databases.
Hansen J.J.,et al.Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
Bermudez-Fajardo A.,et al.Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
Humphray S.J.,et al.Nature 429:369-374(2004).