Data Sheet (Cat.No.TMAH-00576)

Anti-HSPA5 Antibody (4P679)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4P679
Purification:	Affinity-chromatography

Applications

Verified Activity:	IHC image of TMAH-00576 diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.
Application:	ELISA,IHC
Recommended	IHC:1:50-1:200.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human GRP78 BiP
Antigen Species:	Human
Gene ID:	3309
Uniprot ID:	P11021
Synonyms:	78 kDa glucose-regulated protein;Binding-immunoglobulin protein;Endoplasmic reticulum chaperone BiP;GRP78;BiP;Immunoglobulin heavy chain-binding protein;EC 3.6.4.10;Heat shock protein family A member 5;Heat shock protein 70 family protein 5;GRP-78;HSP70 family protein 5;HSPA 5
Biology Area:	Tags & Cell Markers

Research Background

Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen. 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. Acts as a key repressor of the ERN1/IRE1-mediated unfolded protein response (UPR). 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. Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP from ERN1/IRE1, allowing homodimerization and subsequent activation of ERN1/IRE1. 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. (Microbial infection) Plays an important role in viral binding to the host cell membrane and entry for several flaviruses such as Dengue virus, Zika virus and Japanese encephalitis virus. Acts as a component of the cellular receptor for Dengue virus serotype 2/DENV-2 on human liver cells. (Microbial infection) Acts as a receptor for CotH proteins expressed by fungi of the order mucorales, the causative agent of mucormycosis, which plays an important role in epithelial cell invasion by the fungi. Acts as a receptor for R.delemar CotH3 in nasal epithelial cells, which may be an early step in rhinoorbital/cerebral mucormycosis (RCM) disease progression.

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