

# Goat anti-HSPA5 / GRP78 (aa118-131) Antibody

Peptide-affinity purified goat antibody  
Catalog # AF4374a

## Product Information

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<b>Application</b>	WB, IF, Pep-ELISA
<b>Primary Accession</b>	<a href="#">P11021</a>
<b>Other Accession</b>	<a href="#">NP_005338.1</a>
<b>Reactivity</b>	Human
<b>Host</b>	Goat
<b>Clonality</b>	Polyclonal
<b>Clone Names</b>	HSPA5
<b>Calculated MW</b>	72333

## Additional Information

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<b>Gene ID</b>	3309
<b>Other Names</b>	HSPA5; heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa); BIP; GRP78; HEL-S-89n; MIF2; 78 kDa glucose-regulated protein; endoplasmic reticulum lumenal Ca(2+)-binding protein grp78; epididymis secretory sperm binding protein Li 89n; immunoglobulin
<b>Dilution</b>	WB~~1:1000 IF~~1:50~200 Pep-ELISA~~N/A
<b>Format</b>	Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	Goat anti-HSPA5 / GRP78 (aa118-131) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	HSPA5 ( <a href="#">HGNC:5238</a> )
<b>Function</b>	Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen (PubMed: <a href="#">2294010</a> , PubMed: <a href="#">23769672</a> , PubMed: <a href="#">23990668</a> , PubMed: <a href="#">28332555</a> ). 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:[11907036](#), PubMed:[1550958](#), PubMed:[19538957](#), PubMed:[36739529](#)). 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)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.