

## Product datasheet for **TA336638**

### GRP78 (HSPA5) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Immunocytochemistry/ Immunofluorescence: 1:20, Simple Western: 1:25, Western Blot: 2 ug/ml, Immunohistochemistry-Paraffin, Immunohistochemistry
Reactivity:	Mouse, Rat (Does not react with: Human, Primate)
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to a C-terminal portion of rat GRP78 (within residues 600-654). [UniProt# P06761]
Formulation:	PBS, 30% glycerol, 0.1% Sodium Azide. Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	78 kDa
Gene Name:	heat shock protein family A (Hsp70) member 5
Database Link:	<a href="#">NP_005338</a> <a href="#">Entrez Gene 14828 MouseEntrez Gene 25617 RatEntrez Gene 3309 Human P11021</a>



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**Background:**

Within the ER misfolded proteins are detected by Bip(GPR78). In the presence of misfolded proteins, Bip dissociates from PERK, allowing it to homodimerize and autophosphorylate. In its dimerized, phosphorylated form PERK phosphorylates eIF2. The phosphorylation of eIF2 blocks the majority of translation to prevent the continued accumulation of protein in the ER. Bip also binds to IRE1 and ATF6 under normal ER conditions, but dissociates upon accumulation of misfolded proteins. Unbound ATF6 is translocated to the Golgi where it is converted into a cleaved, active form. The cleaved form of ATF6 is then able to up regulate transcription of UPR genes including XBP1. Activated IRE1 acts as an endonuclease to an intron from XBP1 transcripts. The XBP1 splice variant codes for an active transcription factor which activates transcription of P58IPK. P58IPK is a HSP40 protein which binds to and inhibits PERK. Thus, if the accumulated, misfolded proteins have been removed, P58IPK acts to shut down the UPR by removing the block to translation.

**Synonyms:**

BIP; GRP78; HEL-S-89n; MIF2

**Note:**

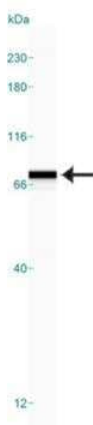
This GRP78 antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot. In Western blot this antibody detects a 78 kDa protein representing GRP 78 from rat liver extract and HeLa cells. In ICC/IF, cytoplasmic staining was observed in HeLa cells.

**Protein Families:**

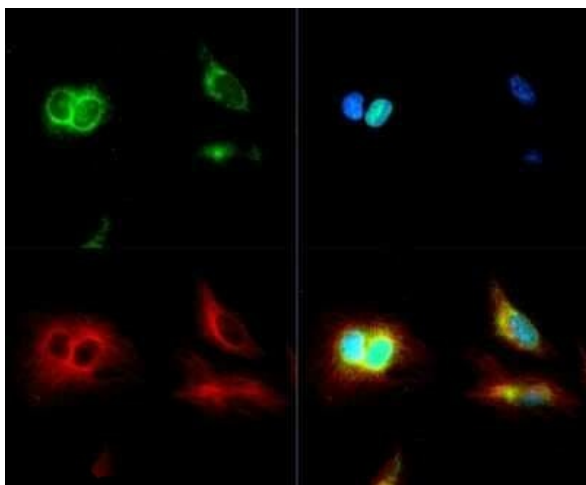
Druggable Genome

**Protein Pathways:**

Antigen processing and presentation, Prion diseases

**Product images:**

Simple Western: GRP78/HSPA5 Antibody TA336638 - Lane view shows a specific band for GRP78 in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230kDa separation system.



Immunocytochemistry/Immunofluorescence: GRP78/HSPA5 Antibody TA336638 - GRP78/BIP antibody was tested in HeLa cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).

Fig. 1



Western Blot: GRP78/HSPA5 Antibody TA336638 - GRP78 on indicated cell extracts using TA336638.