# Human/Mouse/Rat GRP78/HSPA5 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4846

## DESCRIPTION

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|---|---|
| **Species Reactivity** | Human/Mouse/Rat |
| **Specificity** | Detects endogenous human, mouse and rat GRP78 in Western blots. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | *E. coli*-derived recombinant human GRP78/HSPA5<br>Met1-Leu654<br>Accession # P11021 |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

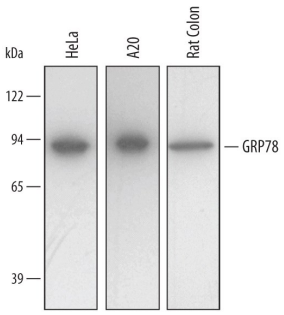
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 0.5 µg/mL | See Below |
| **Simple Western** | 5 µg/mL | See Below |

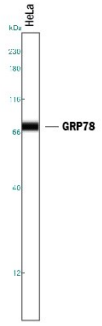
## DATA

### Western Blot




**Detection of Human and Rat GRP78/HSPA5 by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and A20 mouse B cell lymphoma cell line. PVDF membrane was probed with 0.5 µg/mL of Human/Mouse/Rat GRP78/HSPA5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4846) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for GRP78/HSPA5 at approximately 80 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

### Simple Western




**Detection of Human GRP78/HSPA5 by Simple Western™.** Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for GRP78/HSPA5 at approximately 74 kDa (as indicated) using 5 µg/mL of Goat Anti-Human/Mouse/Rat GRP78/HSPA5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4846) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

GRP78 (Glucose-regulated protein 78 kDa; also BiP and HSPA5) is a 72 kDa member of the heat shock protein 70 family of proteins. Intracellularly, GRP78 is an endoplasmic reticulum chaperone that participates in protein folding; extracellularly, it induces IL-10 production from T cells and interacts with Cripto to block TGF-β signaling. Human GRP78 precursor is 654 amino acids (aa) in length. It contains an 18 aa signal sequence and a 636 aa mature region that shows a hydantoinase A region (aa 145-245) and a C-terminal KDEL motif that is present on intracellular GRP78, but absent on secreted GRP78. There is alternative splicing in the signal sequence (aa 1-10), and multiple single aa substitituion. Over aa 1-654, human GRP78 is more than 97% aa identical to mouse and rat GRP78.



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