**GRP78 Ab**

**Cat.#:** AF5366  
**Concn.:** 1mg/ml  
**Size:** 100ul,200ul  
**Source:** Rabbit  
**Mol.Wt.:** 78 kDa  
**Clonality:** Polyclonal

**Application:**  
WB 1:500-1:2000, IHC 1:50-1:200, IF 1:100-1:500

**Reactivity:**  
Human, Mouse, Rat, Monkey

**Purification:**  
The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific).

**Specificity:**  
GRP78 Ab detects endogenous levels of total GRP78.

**Immunogen:**  
A synthesized peptide derived from human GRP78.

**Uniprot:**  
P11021

**Description:**  
GRP78 is a member of the HSP family of molecular chaperones required for endoplasmic reticulum integrity and stress-induced autophagy. Plays a central role in regulating the unfolded protein response (UPR), and is an obligatory component of autophagy in mammalian cells. May play an important role in cellular adaptation and oncogenic survival. One of the client proteins of GRP78 is protein double-stranded RNA-activated protein-like endoplasmic reticulum kinase (PERK).

**Subcellular Location:**  
Endoplasmic reticulum lumen. Melanosome. Cytoplasm. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

**Tissue Specificity:**  
By endoplasmic reticulum stress.

**Similarity:**  
The interdomain linker regulates the chaperone activity by mediating the formation of homooligomers. Homooligomers are formed by engagement of the interdomain linker of one HSPA5/BiP molecule as a typical substrate of an adjacent HSPA5/BiP molecule. HSPA5/BiP oligomerization inactivates participating HSPA5/BiP protomers. HSPA5/BiP oligomers probably act as reservoirs to store HSPA5/BiP molecules when they are not needed by the cell. When the levels of unfolded proteins rise, cells can rapidly break up these oligomers to make active monomers. Belongs to the heat shock protein 70 family.

**Storage Condition and Buffer:**  
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at -20 °C. Stable for 12 months from date of receipt.
Western blot analysis of GRP78 expression in COS7 cell lysate. The lane on the left is treated with the antigen-specific peptide.

AF5366 at 1/150 staining human brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the Ab for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit Ab was used as the secondary.

Western blot analysis of extracts of various cell lines, using GRP78 Ab

AF5366 staining lovo cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37°C. The primary Ab was diluted 1/400 and incubated with the sample for 1 hour at 37°C. A Alexa Fluor® 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary Ab.

AF5366 staining COS7 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary Ab.

**IMPORTANT:** For western blot, incubate membrane with diluted primary Ab in 5% w/v milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.