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Datasheet for ABIN2486758
anti-GRP78 antibody (Biotin)

6 Images

Overview

Quantity:	200 µL
Target:	GRP78 (HSPA5)
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GRP78 antibody is conjugated to Biotin
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC), Immunoprecipitation (IP)

Product Details

Immunogen:	Rat GRP78 (Bip) synthetic peptide conjugated to KLH
Specificity:	Detects ~78 kDa.
Cross-Reactivity:	Cow, Dog, Fusarium, Hamster, Human, Monkey, Mouse, Rabbit, Rat, Xenopus laevis
Purification:	Peptide Affinity Purified

Target Details

Target:	GRP78 (HSPA5)
Alternative Name:	GRP78 (HSPA5 Products)
Background:	GRP78 is a ubiquitously expressed, 78- kDa glucose regulated protein, and is commonly referred to as an immunoglobulin chain binding protein (BiP). The BiP proteins are categorized as stress response proteins because they play an important role in the proper folding and

Target Details

assembly of nascent protein and in the scavenging of misfolded proteins in the endoplasmic reticulum lumen. Translation of BiP is directed by an internal ribosomal entry site (IRES) in the 5' non-translated region of the BiP mRNA. BiP IRES activity increases when cells are heat stressed (1). GRP78 is also critical for maintenance of cell homeostasis and the prevention of apoptosis (2). Luo et al. have provided findings that suggest GRP78 is essential for embryonic cell growth and pluripotent cell survival (3). In terms of diseases, GRP78 has been shown to be a reliable biomarker of hypoglycemia, to serve a neuroprotective function in neurons exposed to glutamate and oxidative stress (4), and its protein levels are reduced in the brains of Alzheimer's patients (5). Also, the induction of the GRP78 protein that results in severe glucose and oxygen deprivation could possible lead to drug resistance to anti-tumor drugs (6, 7).

Gene ID: 25617

NCBI Accession: [NP_037215](#)

UniProt: [P06761](#)

Pathways: [Thyroid Hormone Synthesis](#), [ER-Nucleus Signaling](#)

Application Details

Application Notes:

- WB (1:1000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

Comment: A 1:1000 dilution of ABIN2486758 was sufficient for detection of Grp78 in 10 µg of rat tissue lysate by ECL immunoblot analysis.

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 mg/mL

Buffer: PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

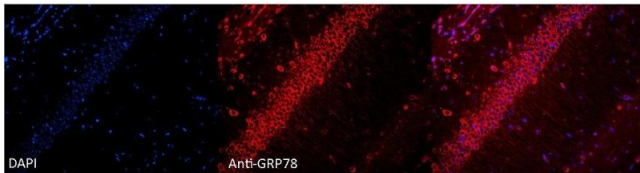
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C

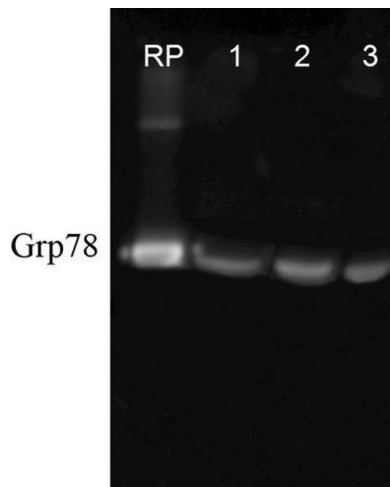
Storage Comment: Conjugated antibodies should be stored at 4°C

Images



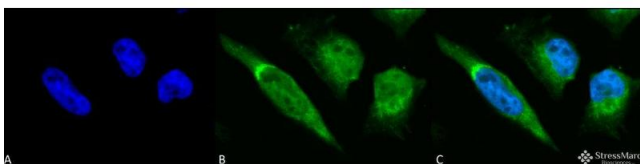
Immunohistochemistry

Image 1. Immunohistochemistry analysis using Rabbit Anti-GRP78 Polyclonal Antibody (ABIN2486758). Tissue: Hippocampal Section. Species: Mouse. Fixation: 4 % Formaldehyde for 12 hours at RT. Paraffin embedded. Primary Antibody: Rabbit Anti-GRP78 Polyclonal Antibody (ABIN2486758) at 1:100 for 12 hours at 4 °C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Rabbit at 1:250 for 1 hour at RT. Counterstain: Hoechst at 1:1000 for 10 min at RT. Localization: Grp78 staining in mouse pyramidal cell layer. Magnification: 20x. Slice thickness: 7 µm. Courtesy of: Rachel Reith, NIH/NIMH.



Western Blotting

Image 2. Western blot analysis of Human, Dog, Mouse Cell line lysates showing detection of GRP78 protein using Rabbit Anti-GRP78 Polyclonal Antibody . Primary Antibody: Rabbit Anti-GRP78 Polyclonal Antibody at 1:1000.



Immunofluorescence (fixed cells)

Image 3. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-GRP78 Polyclonal Antibody . Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-GRP78 Polyclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization:

Endoplasmic reticulum lumen. Melanosome. Cytoplasm .
Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP78 Antibody. (C) Composite. Heat Shocked at 42°C for 30 min.

Please check the [product details page](#) for more images. Overall 6 images are available for ABIN2486758.