Human GRP78/HSPA5 antibody

Catalog Number: ATGA0320

PRODUCT INFORMATION

Catalog number
ATGA0320

Clone No.
AT3D2

Product type
Monoclonal Antibody

UnitProt No.
P11021

NCBI Accession No.
NP_005338

Alternative Names
Heat shock protein family A member 5, Heat shock 70kD protein 5, HSP70 family protein 5, Glucose-regulated protein 78kD, Binding-immunoglobulin protein, BiP, Endoplasmic reticulum chaperone BiP, Glucose-regulated protein 78kDa, Immunoglobulin heavy chain-binding protein

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human BIP (20-650aa) purified from Baculo virus

Isotype
IgG1 kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA, WB, ICC/IF

Usage
The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

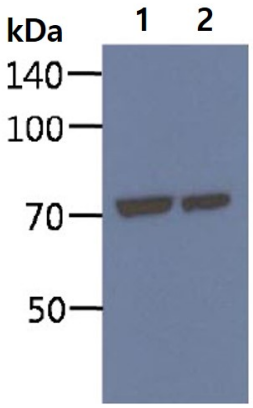
Binding immunoglobulin protein (BIP) also known as 78kDa glucose-regulated protein (GRP-78) or heat shock 70kDa protein 5 (HSPA5) is a HSP70 molecular chaperone located in the lumen of the endoplasmic reticulum (ER) that binds newly synthesized proteins as they are translocated into the ER, and maintains them in a state competent for subsequent folding and oligomerization. BIP is also an essential component of the translocation machinery, as well as playing a role in retrograde transport across the ER membrane of aberrant proteins destined for degradation by the proteasome. BIP is an abundant protein under all growth conditions, but its synthesis is markedly induced under conditions that lead to the accumulation of unfolded polypeptides in the ER.

General References

Ting. J., et al. (1988) DNA 7(4): 275-86.
Hendershot. L.M., et al. (1994) Genomics 20(2): 281-284.

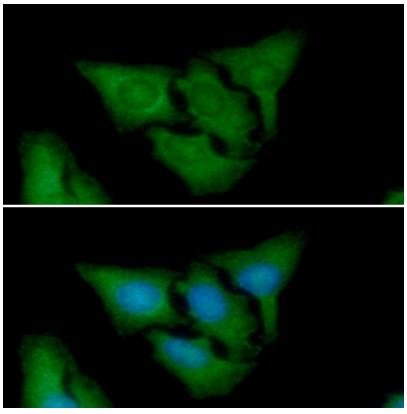
DATA

Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human GRP78/HSPA5 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: HeLa cell lysate
Lane 2.: MCF7 cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of GRP78/HSPA5 in HeLa cells. The cell was stained with ATGA0320 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

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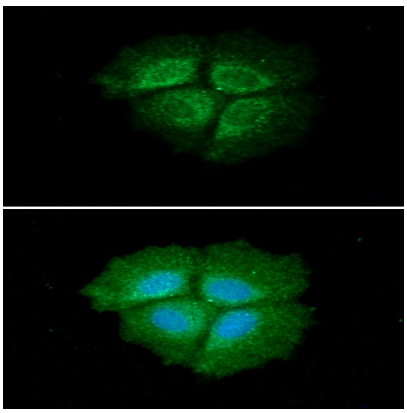

ICC/IF analysis of GRP78/HSPA5 in Hep3B cells. The cell was stained with ATGA0320 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).