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HYOU1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7318c

Product Information

Application	IHC-P, IF, WB, E
Primary Accession	Q9Y4L1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	111335
Antigen Region	274-303

Additional Information

Gene ID	10525
Other Names	Hypoxia up-regulated protein 1, 150 kDa oxygen-regulated protein, ORP-150, 170 kDa glucose-regulated protein, GRP-170, HYOU1, GRP170, ORP150
Target/Specificity	This HYOU1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 274-303 amino acids from the Central region of human HYOU1.
Dilution	IHC-P~~1:100~500 IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HYOU1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HYOU1
Synonyms	GRP170, HSPH4 {ECO:0000303|PubMed:186636
Function	Has a pivotal role in cytoprotective cellular mechanisms triggered by oxygen deprivation. Promotes HSPA5/BiP-mediated ATP nucleotide exchange and

	thereby activates the unfolded protein response (UPR) pathway in the presence of endoplasmic reticulum stress (By similarity). May play a role as a molecular chaperone and participate in protein folding.
Cellular Location	Endoplasmic reticulum lumen.
Tissue Location	Highly expressed in tissues that contain well- developed endoplasmic reticulum and synthesize large amounts of secretory proteins. Highly expressed in liver and pancreas and lower expression in brain and kidney. Also expressed in macrophages within aortic atherosclerotic plaques, and in breast cancers

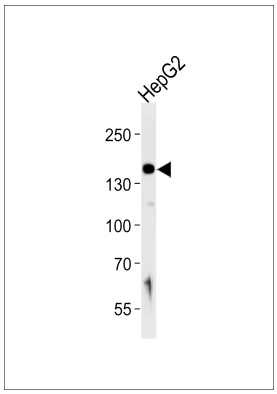
Background

HYOU1 belongs to the heat shock protein 70 family. The protein is thought to play an important role in protein folding and secretion in the ER. Since suppression of the protein is associated with accelerated apoptosis, it is also suggested to have an important cytoprotective role in hypoxia-induced cellular perturbation. This protein has been shown to be up-regulated in tumors, especially in breast tumors, and thus it is associated with tumor invasiveness. This signal peptide-lacking protein, which is only 3 amino acids shorter than the mature protein in the ER, is thought to have a housekeeping function in the cytosol. In rat, this protein localizes to both the ER by a carboxy-terminal peptide sequence and to mitochondria by an amino-terminal targeting signal.

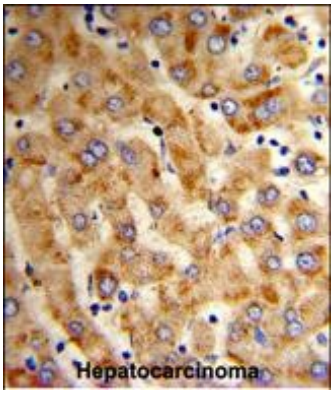
References

Kitao,Y., Matsuyama,T. Antioxid. Redox Signal. 9 (5), 589-595 (2007)
Bando,Y., Ogawa,S. Am. J. Physiol., Cell Physiol. 278 (6), C1172-C1182 (2000)

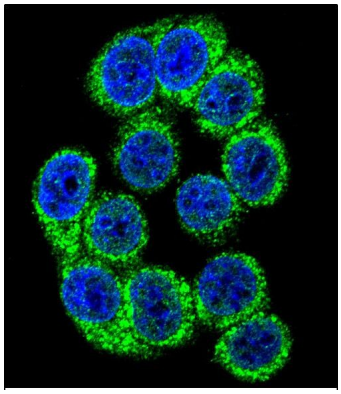
Images



Western blot analysis of lysate from HepG2 cell line, using HYOU1 Antibody (Center)(Cat. #AP7318c). AP7318c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with HYOU1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of HYOU1 Antibody (Center)(Cat#AP7318c) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).