10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-HSPE1 Antibody

Catalog # AP51272

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P61604
Reactivity	Human, Mouse, Rat, Pig, Bovine, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	10932

Additional Information

Gene ID	3336
Other Names	10 kDa heat shock protein mitochondrial; Hsp10; 10 kDa chaperonin; Chaperonin 10; CPN10; Early-pregnancy factor; EPF
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human HSPE1. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

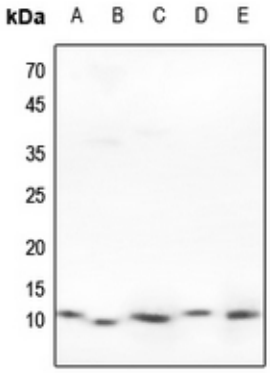
Name	HSPE1
Function	Co-chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp60, facilitates the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix (PubMed:11422376, PubMed:1346131, PubMed:7912672). The functional units of these chaperonins consist of heptameric rings of the large subunit Hsp60, which function as a back-to-back double ring. In a cyclic reaction, Hsp60 ring complexes bind one unfolded substrate protein per ring, followed by the binding of ATP and association with 2 heptameric rings of the co-chaperonin Hsp10. This leads to sequestration of the substrate protein in the inner cavity of Hsp60 where, for a certain period of time, it can fold undisturbed by other cell components. Synchronous hydrolysis of ATP in all Hsp60 subunits results in the dissociation of the chaperonin rings and the release of ADP and the folded substrate protein (Probable).

Cellular Location Mitochondrion matrix.

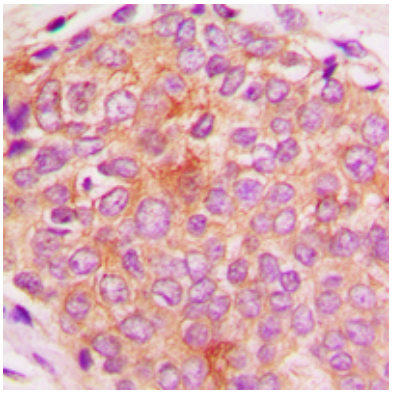
References

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Chen J.J.,et al.Biochim. Biophys. Acta 1219:189-190(1994).
Hansen J.J.,et al.Hum. Genet. 112:71-77(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Ebert L.,et al.Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases.

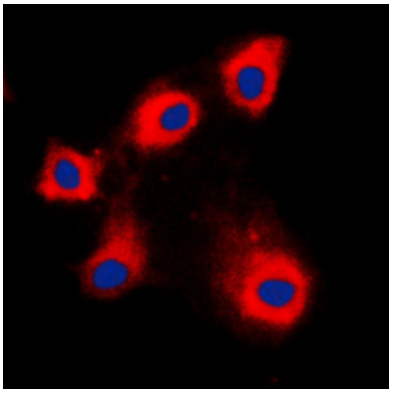
Images



Western blot analysis of HSPE1 expression in H460 (A), mouse lung (B), mouse live (C), rat lung (D), rat liver (E) whole cell lysates. (Predicted band size: 10 kD; Observed band size: 10 kD)



Immunohistochemical analysis of HSPE1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of HSPE1 staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.