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

HSPE1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51272

Product Information

Application	WB
Primary Accession	P61604
Reactivity	Human, Mouse, Rat
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, HSPE1
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
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
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.

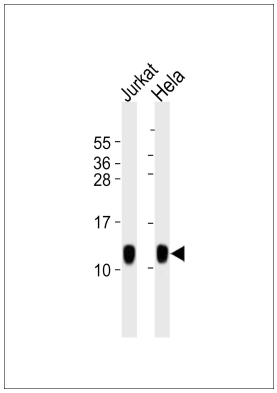
Background

Eukaryotic CPN10 homolog which is essential for mitochondrial protein biogenesis, together with CPN60. Binds to CPN60 in the presence of Mg-ATP and suppresses the ATPase activity of the latter.

References

Monzini N.,et al.Biochim. Biophys. Acta 1218:478-480(1994).
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



All lanes : Anti-HSPE1 Antibody at 1:1000 dilution Lane 1: Jurkat whole cell lysates Lane 2: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 11 kDa Blocking/Dilution buffer: 5% NFDM/TBST.