10320 Camino Santa Fe, Suite G
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Anti-Cpn10 Antibody
Catalog # ABO11098

Specification

Anti-Cpn10 Antibody - Product Information

Application	**ICC, WB, IHC**
Primary Accession	P61604
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for 10 kDa heat shock protein, mitochondrial(HSPE1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Cpn10 Antibody - 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

Calculated MW
10932 MW KDa

Application Details
Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Mitochondrion matrix.

Protein Name
10 kDa heat shock protein, mitochondrial(Hsp10)

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Cpn10(81-102aa VVLDDKDYFLFRDGDILGKYVD), different from the related rat and mouse sequences by one amino acid.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-Cpn10 Antibody - 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.

Anti-Cpn10 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cpn10 Antibody - Images

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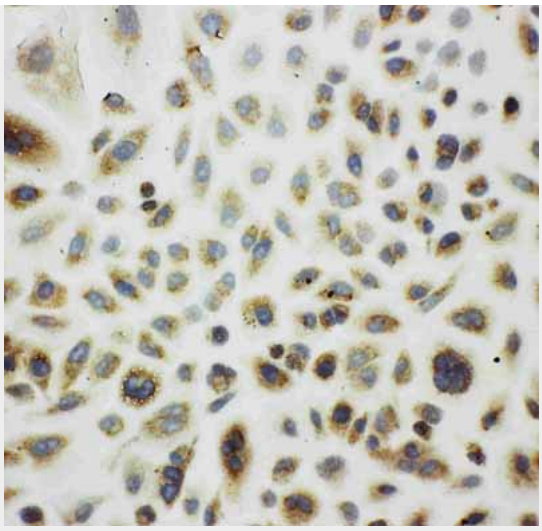
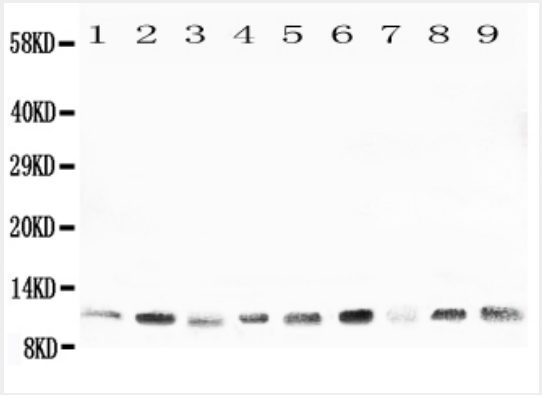
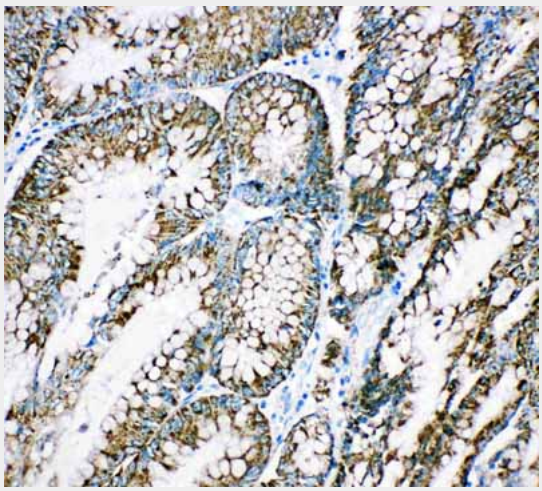


Anti-Cpn10 antibody, ABO11098, ICCICC: A549 Cell



Anti-Cpn10 antibody, ABO11098, Western blottingAll lanes: Anti Cpn10 (ABO11098) at 0.5ug/mlLane 1: Rat Thymus Tissue Lysate at 50ugLane 2: Rat Brain Tissue Lysate at 50ugLane 3: Rat Ovary Tissue Lysate at 50ugLane 4: Rat Testis Tissue Lysate at 50ugLane 5: A431 Whole Cell Lysate at 40ugLane 6: A549 Whole Cell Lysate at 40ugLane 7: MCF-7 Whole Cell Lysate at 40ugLane 8: MM231 Whole Cell Lysate at 40ugLane 9: HELA Whole Cell Lysate at 40ugPredicted bind size: 11KDObserved bind size: 11KD



Anti-Cpn10 antibody, ABO11098, IHC(P)IHC(P): Human Intestinal Cancer Tissue

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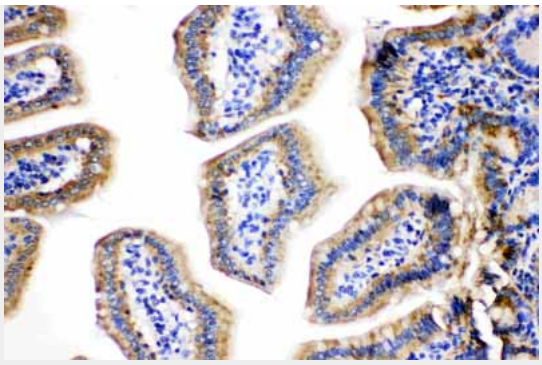
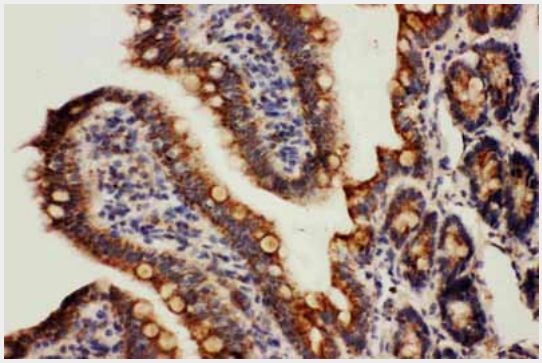


Anti-Cpn10 antibody, ABO11098, IHC(P)IHC(P): Mouse Intestine Tissue



Anti-Cpn10 antibody, ABO11098, IHC(P)IHC(P): Rat Intestine Tissue

Anti-Cpn10 Antibody - Background

HSPE1(heat shock 10kDa protein 1(chaperonin 10)), also called CPN10, GROES, CHAPERONIN 10 HOMOLOG, cpn10 HOMOLOG or HSP10, is a protein that in humans is encoded by the HSPE1 gene. GroES is a heptameric ring of identical 10.4-kD subunits that binds to each end of GroEL to form a symmetric, functional heterodimer. The HSP10 gene consists of 4 exons. The HSPE1 gene is mapped to 2q33.1. The transcriptional activity of the promoter fragment in the HSP60 direction is approximately twice that in the HSP10 direction under normal growth conditions; upon heat shock, promoter activity in either direction increased by a factor of approximately 12. Mutational drifts performed in vitro with 4 different enzymes indicated the GroES overexpression doubled the number of accumulating mutations, and promoted the folding of enzyme variants carrying mutations in the protein core and/or mutations with higher destabilizing effects.