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Anti-HSP60 Antibody

Catalog # ABO10568

Product Information

Application	WB, IHC-P, ICC
Primary Accession	P63039
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for 60 kDa heat shock protein, mitochondrial(HSPD1) 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.

Additional Information

Gene ID	63868
Other Names	60 kDa heat shock protein, mitochondrial, 60 kDa chaperonin, Chaperonin 60, CPN60, HSP-65, Heat shock protein 60, HSP-60, Hsp60, Mitochondrial matrix protein P1, Hspd1, Hsp60
Calculated MW	60955
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, - Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Mitochondrion matrix .
Source	Eukaryota
Protein Name	60 kDa heat shock protein, mitochondrial
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 rat HSP60(503-516aa YDAMLGDFVNMVEK), different from the related human sequence 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.

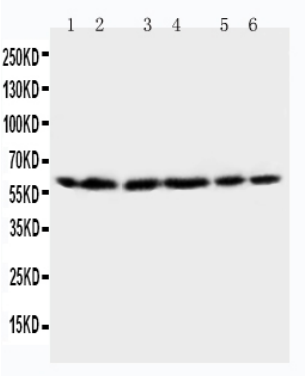
Protein Information

Name	Hspd1
Synonyms	Hsp60
Function	Chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp10, 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. 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.
Cellular Location	Mitochondrion matrix {ECO:0000250|UniProtKB:P10809}

Background

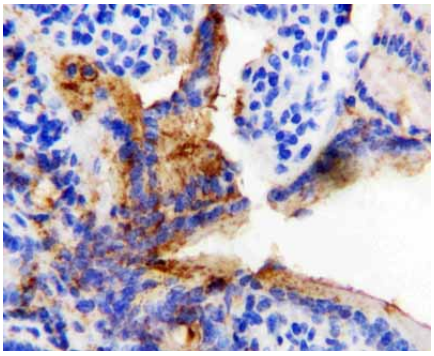
HSP60 is a member of the chaperonin class of protein factors, which include the Escherichia coli groEL protein and the Rubisco subunit-binding protein of chloroplasts. It acts as a costimulator of human regulatory CD4-positive/CD25 -positive T cells, which inhibit lymphoproliferation and IFNG and TNF secretion by CD4-positive and CD8-positive T cells. HSP60 enhances Treg activity via TLR2, leading to activation of an intracellular signaling cascade that included p38, as well as inhibition of ERK phosphorylation. Suppression of target T cells is mediated by both cell-to-cell contact and by secretion of TGFB and IL10, and it leads to downregulation of ERK, NFKB, and TBET expression. The self-molecule HSP60 can downregulate adaptive immune responses by upregulating Tregs through TLR2 signaling.

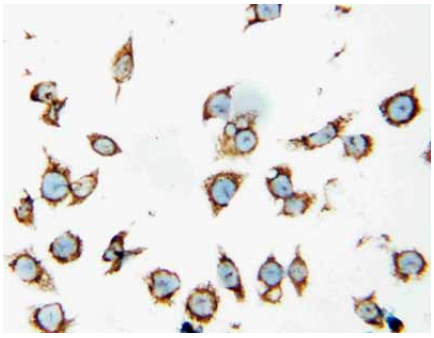
Images



Anti-HSP60 antibody, ABO10568, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Liver Tissue LysateLane 3: CEM Cell LysateLane 4: HELA Cell LysateLane 5: SMMC Cell LysateLane 6: COLO320 Cell Lysate

Anti-HSP60 antibody, ABO10568, IHC(P)IHC(P): Rat Intestine Tissue





Anti-HSP60 antibody, ABO10568, ICCICC: SMMC Cell