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AM20630PU-N Monoclonal Antibody to HSP60 - Purified

Alternate names:	60 kDa chaperonin, 60 kDa heat shock protein mitochondrial, CPN60, Chaperonin 60, GROEL, GroEL Homolog, HSP-60, HSPD1, Heat shock protein 60, HuCHA60, Mitochondrial matrix protein P1, P60 lymphocyte protein
Quantity:	0.1 mg
Concentration:	0,1 mg/ml (after reconstitution with PBS)
Background:	Heat shock 60KD protein (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 TNFsecretion 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.
Uniprot ID:	P10809
NCBI:	NP_002147
GeneID:	3329
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
Clone:	SJ-60
Immunogen:	Recombinant human heat shock protein 60 (HSP60)
Format:	**State:** Lyphilized purified Ig fraction **Purification:** Affinity chromatography **Buffer System:** 1.2 % sodium acetate, with 2 mg BSA and 0.01 mg sodium azide as preservative **Reconstitution:** Restore with 1.2% sodium acetate or neutral PBS
Applications:	Western Blot: 2 - 4 µg/ml. Immunohistochemistry on paraffin sections: 4 - 8 µg/ml. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody reacts to HSP60. **Species:** Human, Chicken, Rat. Other species not tested.

Storage:

Prior to reconstitution store at -20°C.
Following reconstitution store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Cheng MY, Hartl FU, Martin J, Pollock RA, Kalousek F, Neupert W, et al. Mitochondrial heat-shock protein hsp60 is essential for assembly of proteins imported into yeast mitochondria. Nature. 1989 Feb 16;337(6208):620-5. PubMed PMID: 2645524.
2. Hansen JJ, Bross P, Westergaard M, Nielsen MN, Eiberg H, Børglum AD, et al. Genomic structure of the human mitochondrial chaperonin genes: HSP60 and HSP10 are localised head to head on chromosome 2 separated by a bidirectional promoter. Hum Genet. 2003 Jan;112(1):71-7. Epub 2002 Oct 16. PubMed PMID: 12483302.
3. Zanin-Zhorov A, Cahalon L, Tal G, Margalit R, Lider O, Cohen IR. Heat shock protein 60 enhances CD4+ CD25+ regulatory T cell function via innate TLR2 signaling. J Clin Invest. 2006 Jul;116(7):2022-32. Epub 2006 Jun 8. PubMed PMID: 16767222.

Pictures: