Polyclonal Anti-HSP60 (Magnetic Bead conjugate)

Catalogue No. PA1106-M

Lot No. 08F01

Ig type: rabbit IgG

Size: 200µl

Specificity

Human, mouse, rat.

No cross reactivity with other proteins.

Recommended application

Immunoprecipitation(IP

Immunogen

A synthetic peptide mapping at the middle region of human HSP60, identical to the related rat and mouse sequence.

Purity

Immunogen affinity purified.

Contents

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN_3.

Storage

Store at 4˚C for frequent use.

Description

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation.

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.

REFERENCE

1. Cheng, M. Y.; Hartl, F.-U.; Martin, J.; Pollock, R. A.; Kalousek, F.; Neupert, W.; Hallberg, E. M.; Hallberg, R. L.; Horwich, A. L. : Mitochondrial heat-shock protein hsp60 is essential for assembly of proteins imported into yeast mitochondria. *Nature* 337: 620-625, 1989.
2. Zanin-Zhorov, A.; Cahalon, L.; Tal, G.; Margalit, R.; Lider, O.; Cohen, I. R. : Heat shock protein 60 enhances CD4+CD25+ regulatory T cell function via innate TLR2 signaling. *J. Clin. Invest.* 116: 2022-2032, 2006.