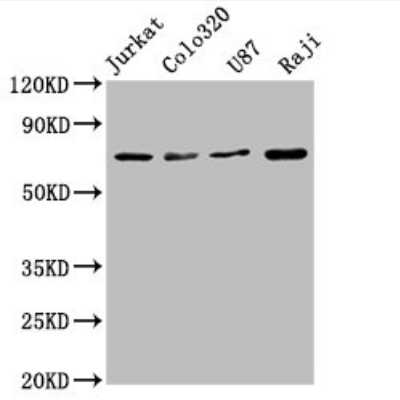
HSPA8 Antibody

Product Code	CSB-RA010829A0HU
Abbreviation	Heat shock cognate 71 kDa protein
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P11142
Immunogen	A synthesized peptide derived from human HSPA8
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	Molecular chaperone implicated in a wide variety of cellular processes, including protection of the proteome from stress, folding and transport of newly synthesized polypeptides, activation of proteolysis of misfolded proteins and the formation and dissociation of protein complexes. Plays a pivotal role in the protein quality control system, ensuring the correct folding of proteins, the re-folding of misfolded proteins and controlling the targeting of proteins for subsequent degradation (PubMed:21150129, PubMed:21148293, PubMed:24732912, PubMed:27916661, PubMed:23018488). This is achieved through cycles of ATP binding, ATP hydrolysis and ADP release, mediated by co-chaperones (PubMed:21150129, PubMed:21148293, PubMed:24732912, PubMed:27916661, PubMed:23018488). The co-chaperones have been shown to not only regulate different steps of the ATPase cycle of HSP70, but they also have an individual specificity such that one co-chaperone may promote folding of a substrate while another may promote degradation (PubMed:21150129, PubMed:21148293, PubMed:24732912, PubMed:27916661, PubMed:23018488). The affinity of HSP70 for polypeptides is regulated by its nucleotide bound state. In the ATP-bound form, it has a low affinity for substrate proteins. However, upon hydrolysis of the ATP to ADP, it undergoes a conformational change that increases its affinity for substrate proteins. HSP70 goes through repeated cycles of ATP hydrolysis and nucleotide exchange, which permits cycles of substrate binding and release. The HSP70-associated co-chaperones are of three types: J-domain co-chaperones HSP40s (stimulate ATPase hydrolysis by HSP70), the nucleotide exchange factors (NEF) such as BAG1/2/3 (facilitate conversion of HSP70 from the ADP-bound to the ATP-bound state thereby promoting substrate release), and the TPR domain chaperones such as HOPX and STUB1 (PubMed:24318877, PubMed:27474739, PubMed:24121476, PubMed:26865365). Acts as a repressor of transcriptional activation. Inhibits the transcriptional coactivator activity of CITED1 on Smad-mediated transcription. Component of the PRP19-CDC5L complex that forms an integral part of the spliceosome and is required for activating pre-mRNA splicing. May have a scaffolding role in the spliceosome assembly as it contacts all other components of the core complex. Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:10722728, PubMed:11276205). Participates in the ER-associated degradation (ERAD) quality control pathway in conjunction with J domain-containing co-chaperones

	and the E3 ligase STUB1 (PubMed:23990462).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Heat shock cognate 71 kDa protein, Heat shock 70 kDa protein 8, Lipopolysaccharide-associated protein 1, LAP-1, LPS-associated protein 1, HSPA8, HSC70, HSP73, HSPA10
Immunogen Species	Homo sapiens (Human)
Research Area	Signal Transduction
Gene Names	HSPA8
Accession NO.	3G10

Image



Western Blot
Positive WB detected in: Jurkat whole cell lysate, Colo320 whole cell lysate, U87 whole cell lysate, Raji whole cell lysate
All lanes: HSPA8 antibody at 1.72μg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 71, 54 KDa
Observed band size: 71 KDa

Description

The HSPA8 antibody is a recombinant monoclonal antibody matched isotype control by rabbit IgG. Its production process includes the cloning of the human HSPA8 DNA gene into the vector and the transfection of the clones into the cell line for in vitro expression. This HSPA8 antibody can recognize human HSPA8 protein. It has been purified using affinity-chromatography and been tested for use in ELISA and WB applications.

HSPA8, also called HSC70, is a chaperone protein that promotes the proper folding of newly translated and misfolded proteins, as well as the stabilization or degradation of mutant proteins. It is involved in multiple biological processes, including signal transduction, apoptosis, autophagy, protein homeostasis, and cell growth and differentiation. Studies have linked HSPA8 to an extensive number of cancers, neurodegenerative diseases, cell senescence, and aging.