

A brief overview of Heat Shock Protein

Heat shock proteins (HSPs) have been studied for their role in protecting cells from high temperature and stress conditions. HSPs have been classified into six major families based on their molecular masses such as HSPH (HSP110), HSPC (HSP90), HSPA (HSP70), DNAJ (HSP40), HSPB (small HSPs), and the chaperonin families HSPD/E (HSP60/HSP10) and CCT (TRiC). The inducible HSP expression is regulated by the heat-shock transcription factors. HSPs have been involved in different functions including chaperone activity, protein folding, apoptosis, autophagy, and immunity. Also, HSP families stimulate innate immunity through Toll-like receptors and scavenger receptors. HSP-mediated phagocytosis enhances the presentation of internalized antigens via the endocytic pathway in adaptive immune system.

Heat Shock Proteins (HSPs) related Proteins and Antibodies

• Small Hsp Family (sHSP) Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	HSP27/HSPB1	1-205aa	H	<i>E.coli</i>	His	>95%	P	NA	ATGP0444
		1-205aa	H	<i>E.coli</i>	Non	>95%	P	NA	HSP0503
		1-209aa	M	<i>E.coli</i>	His	>90%	NA	NA	ATGP3866
BEST	HSPB2	1-182aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1549
	HSPB3	1-150aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP1202
BEST	Alpha A Crystallin/CRYAA	1-173aa	H	<i>E.coli</i>	Non	>95%	NA	NA	CRA3001
BEST	Alpha B Crystallin/CRYAB	1-175aa	H	<i>E.coli</i>	Non	>95%	NA	NA	CRA3002
		1-175aa	M	<i>E.coli</i>	Non	>95%	NA	NA	CRB0801
	HSP20/HSPB6	1-160aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP3008
	HSPB7	1-170aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP0511
BEST	HSPB8	1-196aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0493
	HSPB9	1-159aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP1492
	HSPB11	1-144aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1061
	HO-1/HMOX1/HSP32	1-266aa	H	<i>E.coli</i>	His	>95%	P	NA	HMO0901
	hchA	1-283aa	<i>E.coli</i>	<i>E.coli</i>	His	>95%	NA	NA	ATGP1023

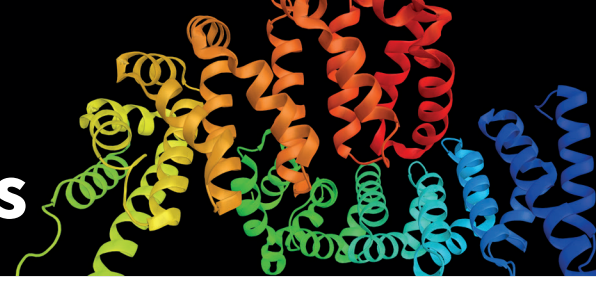
• HSP40/DNAJ Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	DNAJA1	1-376aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	DNJ3001
	HSP40/DNAJB1	1-340aa	H	<i>E.coli</i>	His	>95%	P	NA	HSP0701
	DNAJB2	1-277aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0788
	DNAJB4	1-337aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1912
	DNAJB6	1-326aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP0859
	DNAJB8	1-232aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1265
BEST	DNAJB11	23-358aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0985
	DNAJC12	1-198aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1636
	DNAJC15	58-150aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2300
	DNAJC19	19-116aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0911
	HSCB/DNAJC20	30-235aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1604
	DNAJC24	1-149aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2111
	DNAJC27	1-273aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2751
BEST	HSP47/Colligin	18-418aa	H	<i>E.coli</i>	His	>90%	NA	NA	HSP0904

• HSP60/HSP10 Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	HSP60	1-573aa	H	<i>E.coli</i>	His	>95%	NA	NA	HSP0802
		27-573aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2027
BEST	GroEL	1-548aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	GRL3001
	TCP1	1-556aa	H	<i>E.coli</i>	His	>80%	NA	NA	ATGP0768
BEST	HSP10/EPF	1-102aa	H	<i>E.coli</i>	Non	>95%	P	NA	HSP0801
BEST	GroES	1-97aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	GRS3002

H : Human M : Mouse P : Pass NA : Not Analyzed



• HSP70 Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	HSP70	1-641aa	H	<i>E.coli</i>	His	>95%	P	NA	HSP0603
	HSP70B	1-643aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0428
	GRP78/HSPA5	19-654aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2212
BEST		20-650aa	H	<i>E.coli</i>	His	>90%	NA	NA	BIP0901
		20-650aa	H	Baculovirus	His	>90%	P	NA	ATGP0824
		20-655aa	M	<i>E.coli</i>	His	>90%	NA	NA	ATGP3685
BEST	HSPA8/HSC71	1-646aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0415
BEST	GRP75/HSPA9B	47-679aa	H	<i>E.coli</i>	His	>95%	NA	NA	HSP0901
	HSPA13	23-471aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP0971
	Dnak	1-384aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	DNK3002
		1-638aa	<i>E.coli</i>	<i>E.coli</i>	Non	>85%	NA	NA	DNK3001
BEST		385-546aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	DNK2001
		385-638aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	DNK3003
	508-638aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	NA	DNK3004	
	GrpE	1-197aa	<i>E.coli</i>	<i>E.coli</i>	Non	>90%	NA	NA	GRP0701
	HSPBP1	1-362aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP0554
BEST	CHIP/STUB1	1-303aa	H	<i>E.coli</i>	Non	>90%	P	NA	CHP0905
	SGTA	1-313aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP0533
	Hip/ST13	1-369aa	H	<i>E.coli</i>	Non	>90%	P	NA	HIP0905
	BAG1	1-230aa	H	<i>E.coli</i>	Non	>85%	NA	NA	ATGP0508
	BAG2	1-211aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP0952
BEST	BAG3	1-575aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0440
	STI1	1-543aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0426
BEST		1-543aa	H	<i>E.coli</i>	Non	>95%	NA	NA	ATGP3391
		1-543aa	M	<i>E.coli</i>	His	>95%	NA	NA	ATGP3526
	SIL1	32-461aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1580

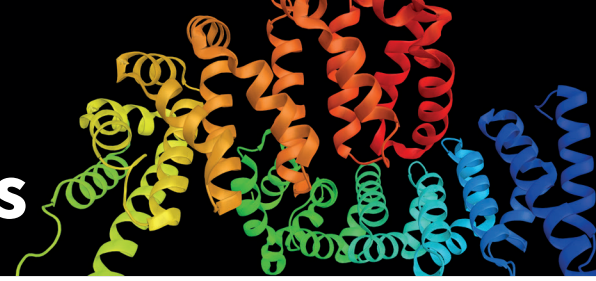
• HSP90 Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	HSP90 alpha	1-732aa	H	<i>E.coli</i>	His	>90%	NA	NA	HSP0501
BEST	gp96/HSP90B1	22-803aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0276
	Activator of HSP90 ATPase-1/AHA1	19-337aa	H	<i>E.coli</i>	Non	>95%	P	NA	AHA0701
	CDC37	1-378aa	H	<i>E.coli</i>	Non	>95%	P	NA	CDC0901
	p23/PTGES3	1-160aa	H	<i>E.coli</i>	Non	>95%	NA	NA	ATGP0418
	STI1	1-543aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0426
BEST		1-543aa	H	<i>E.coli</i>	Non	>95%	NA	NA	ATGP3391
		1-543aa	M	<i>E.coli</i>	His	>95%	NA	NA	ATGP3526
BEST	CHIP/STUB1	1-303aa	H	<i>E.coli</i>	Non	>90%	P	NA	CHP0905

• HSP100 Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
	HSP104	1-908aa	H	<i>E.coli</i>	Non	>90%	NA	NA	HSP0502
BEST	HSPH1	1-858aa	H	<i>E.coli</i>	His	>90%	NA	NA	HSP0803

H : Human M : Mouse P : Pass NA : Not Analyzed



• Cyclophilin Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	Cyclophilin A/PPIA	1-165aa	H	<i>E.coli</i>	Non	>95%	P	P	CYP0702
		1-164aa	M	<i>E.coli</i>	His	>95%	NA	NA	ATGP2981
		25-190aa	<i>E.coli</i>	<i>E.coli</i>	His	>95%	NA	NA	ATGP2983
BEST	Cyclophilin B/PPIB	26-216aa	H	<i>E.coli</i>	Non	>95%	P	P	CYP0701
		34-216aa	M	<i>E.coli</i>	His	>95%	NA	P	ATGP3599
BEST	Cyclophilin-40/PPID	1-370aa	H	<i>E.coli</i>	His	>95%	P	P	CYP0801
		1-370aa	M	<i>E.coli</i>	His	>90%	NA	P	ATGP3724
	Cyclophilin E/PPIE	1-301aa	H	<i>E.coli</i>	His	>95%	NA	P	PPE0901
		30-207aa	H	<i>E.coli</i>	His	>95%	P	P	PPF0901
BEST	Cyclophilin D/Cyclophilin F/PPIF	30-206aa	R	<i>E.coli</i>	His	>90%	NA	NA	ATGP3129
		30-206aa	R	<i>E.coli</i>	His	>90%	NA	P	ATGP3496
	Cyclophilin G/PPIG	1-175aa	H	<i>E.coli</i>	His	>95%	NA	P	ATGP0431
	Cyclophilin H/PPIH	1-177aa	H	<i>E.coli</i>	Non	>95%	P	P	PPH0901
	PPIL1/Cyclophilin-like 1	1-166aa	H	<i>E.coli</i>	His	>95%	NA	P	PPL0901
	PPIL2	1-527aa	H	<i>E.coli</i>	His	>95%	NA	P	ATGP0498
	PPIL3	1-161aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP1230
	PPIL4	1-492aa	H	<i>E.coli</i>	His	>85%	NA	P	ATGP0791

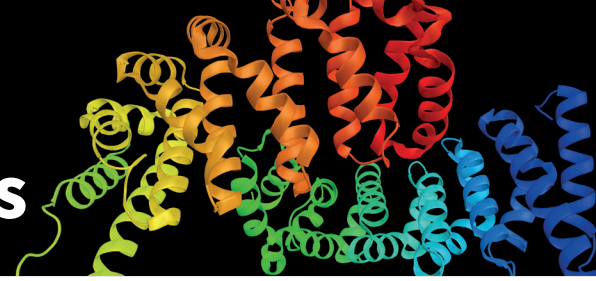
• Protein Disulfide Isomerase (PDI) Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
	P4HB	18-508aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP3136
		18-508aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0670
		20-509aa	M	Baculovirus	His	>95%	P	P	ATGP3297
BEST	ERp57/PDIA3	25-505aa	H	<i>E.coli</i>	His	>95%	NA	P	ATGP3137
		25-505aa	H	<i>E.coli</i>	His	>95%	NA	NA	ATGP0462
		25-505aa	M	<i>E.coli</i>	His	>95%	NA	P	ATGP3620
	PDIA4	21-645aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP3138
		21-645aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0686
BEST	PDIA6	20-440aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP3139
		20-440aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0773
	ERp27	26-273aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0829
	ERp44	30-406aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0678
	TXNDC12	27-172aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1591
BEST	AG-2/AGR2	21-175aa	H	<i>E.coli</i>	His	>90%	NA	NA	AGR0706
		21-175aa	M	<i>E.coli</i>	His	>90%	NA	NA	ATGP3525
	AG-3	22-166aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP1096

• FK506 binding protein (FKBP) Family Recombinant Proteins

	Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST	FKBP52/FKBP4	1-459aa	H	<i>E.coli</i>	His	>95%	P	P	ATGP0303
BEST	FKBP1a/FKBP12	1-108aa	H	<i>E.coli</i>	His	>95%	P	P	ATGP0290
		1-108aa	M	<i>E.coli</i>	His	>95%	NA	NA	ATGP3084
BEST	FKBP12.6	1-108aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP1266
	FKBP6	1-327aa	H	<i>E.coli</i>	His	>95%	NA	P	ATGP0560
BEST	FKBP13	22-142aa	H	<i>E.coli</i>	Non	>90%	P	P	ATGP0506
BEST	FKBP14	20-211aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP0604
	FKBP25	1-224aa	H	<i>E.coli</i>	Non	>90%	NA	P	ATGP0494
	FKBPL	1-349aa	H	<i>E.coli</i>	His	>90%	NA	P	ATGP0623
	SlyD	1-196aa	<i>E.coli</i>	<i>E.coli</i>	Non	>95%	NA	P	SLD0801

H : Human M : Mouse R : Rat P : Pass NA : Not Analyzed



• Heat Shock Factor Recombinant Proteins

Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
BEST HSF1	1-529aa	H	<i>E.coli</i>	His	>75%	NA	NA	HSF0801
HSFY1	1-401aa	H	<i>E.coli</i>	His	>80%	NA	NA	ATGP2475(D)
HSBP1	1-76aa	H	<i>E.coli</i>	Non	>95%	NA	NA	HSB3001
HSF2BP	1-334aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP2784
HSPBAP1	1-488aa	H	<i>E.coli</i>	His	>80%	NA	NA	ATGP1051

• Monoclonal Antibodies

Product name	Clone No.	Applications	Isotype	Host	Cat No.
HSP27	2A5	ELISA, WB, FACS, ICC/IF, IHC	IgG1, k	M	AHS0702
BEST Alpha A Crystallin/CRYAA	c9F2	ELISA, WB, FACS	IgG1, k	M	ACA0401
	c9F2 (TCS)	ELISA, WB	IgG1, k	M	ATGA0550
BEST Alpha B Crystallin/CRYAB	2E8	ELISA, WB, ICC/IF	IgG2b, k	M	ACB0617
HO-1/HMOX1/HSP32	AT1D6	ELISA, WB, FACS, ICC/IF	IgG2a, k	M	ATGA0454
HSP40/DNAJB1	k1C7	ELISA, WB	IgG2a, k	M	AHS0716
BEST HSP60	2E9	ELISA, WB, ICC/IF, IHC	IgG1, k	M	AHS0815
TBCA	AT1A5	ELISA, WB, FACS, ICC/IF	IgG2b, k	M	ATGA0155
BEST HSP70	4E7	ELISA, WB, ICC/IF, IHC	IgG1, k	M	AHS0703
BEST GRP78/HSPA5	AT3D2	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0320
	AT3D2 (TCS)	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0564
HSPA13	AT2F6	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0477
SGTA	AT19E8	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0408
ST13	AT5C6	ELISA, WB, FACS, ICC/IF	IgG2a, k	M	ATGA0309
BAG2	AT29E9	ELISA, WB, ICC/IF	IgG2a, k	M	ATGA0438
BEST HSP90 alpha	4F10	ELISA, WB, FACS, ICC/IF, IHC	IgG2b, k	M	AHS0704
BEST gp96/HSP90B1/TRA1	2H3	ELISA, WB, FACS, ICC/IF	IgG2a, k	M	ATA0623
	AT94B9	ELISA, WB, FACS, ICC/IF	IgG2b, k	M	ATGA0348
AHA1	AT3E9	ELISA, WB, ICC/IF	IgG2b, k	M	ATGA0388
CDC37	AT3G7	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0428
BEST HSPH1	J1G12	ELISA, WB, FACS, ICC/IF	IgG2b, k	M	AHS0827
BEST Cyclophilin B	k2E2	ELISA, WB, FACS, ICC/IF	IgG1, k	M	ACB0825
	k2E2 (TCS)	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0545
Cyclophilin C	AT3C6	ELISA, WB, FACS, ICC/IF	IgG2b, k	M	ATGA0218
Cyclophilin D	AT1B8	ELISA, WB, ICC/IF	IgG2b, k	M	ATGA0473
Cyclophilin E	AT17E8	ELISA, WB	IgG1, k	M	ATGA0465
Cyclophilin F	AT1F5	ELISA, WB, ICC/IF, IHC	IgG2b, k	M	ATGA0139
ERp57/PDIA3	AT9E9	ELISA, WB, ICC/IF	IgG2a, k	M	ATGA0410
BEST FKBP52 /FKBP4	AT4D3	ELISA, WB, FACS, ICC/IF, IHC	IgG2b, k	M	ATGA0142
FKBP6	AT9B7	ELISA, WB	IgG1, k	M	ATGA0275
FKBP14	AT18E2	ELISA, WB, ICC/IF	IgG1, k	M	ATGA0436

H : Human M : Mouse P : Pass NA : Not Analyzed D : Denatured form TCS : Tissue Cell Supernatant