

Materials List for:

Recombinant Protein Expression, Crystallization, and Biophysical Studies of a *Bacillus*-conserved Nucleotide Pyrophosphorylase, BcMazG

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Materials

Name	Company	Catalog Number	Comments
<i>Bacillus cereus</i> ATCC14579	Korean Collection for Tissue Culture	3624	
Genomic DNA prep kit	GeneAll	106-101	Genomic DNA preparation
Forward primer	Macrogen	GAAGGATCCGGAAGCAAAAA CGATGAAAGATATGCA	<i>Bam</i> HI site is underlined
Reverse primer	Macrogen	CTTGTCGACTTATTCTTTCTCT CCCTCATCAATACGTG	<i>Sa</i> II site is underlined
nPfu-Forte	Enzynomics	P410	PCR polymerase
<i>Bam</i> HI	Enzynomics	R003S	
<i>Sa</i> II	Enzynomics	R009S	
pET49b expression vector	Novagen	71463	Expression vector was modified to add affinity tags and <i>Bam</i> HI/ <i>Sa</i> II sites ¹⁰
T4 DNA ligase	Enzynomics	M001S	
Dialysis membrane	ThermoFisher	18265017	
Dry block heater	JSR	JSBL-02T	
LB broth (Luria-Bertani)	LPS solution	LB-05	
LB Agar, Miller (Luria-Bertani)	Becton, Dickinson and Company		
Kanamycin	LPS solution	KAN025	
Mini-prep kit	Favorgen	FAPDE300	Plasmid DNA preparation
BL21(DE3) Competent cell	Novagen	69450-3CN	
Isopropyl β-D-1-thiogalactopyranoside (IPTG)	Fisher BioReagents	50-213-378	
Sodium chloride	Daejung	7548-4100	PBS material
Potassium chloride	Daejung	6566-4405	PBS material
Potassium phosphate	Bio Basic Inc	PB0445	PBS material
Sodium phosphate	Bio Basic Inc	S0404	PBS material
Imidazole	Bio Basic Inc	IB0277	
Sonicator	Sonics	VCX 130	
Ni-NTA agaros	Qiagen	30210	Nickel bead
Rotator	Finepcr	AG	
Precision Plus Protein Dual Color Standards	Bio-rad	1610374	SDS-PAGE protein standard
Coomassie Brilliant Blue R-250	Fisher BioReagents	BP101-25	Coomassie staining solution
Methyl alcohol	Samchun chemical	M0585	Coomassie staining solution
Acetic acid	Daejung	1002-4105	Coomassie staining solution

Dialysis membrane	ThermoFisher	68035	
2-Mercaptoethanol	Sigma-aldrich	M6250	
Thrombin	Merckmillipore	605157-1KUCN	Prepare aliquots of 20 μ L (1 Unit per μ L) and store at 70 °C and thaw before use
Superdex 200 16/600	General Electric	28989335	Size exclusion chromatography
Gel filtration standard	Bio-rad	151-1901	
Centrifugal filter	Amicon	UFC800396	
Crystallization plates	Hampton research	HR3-083	96-well sitting drop plate
The JCSG core suite I-IV	Qiagen	130924-130927	Crystallization screening solution
Microscope	Nikon	SMZ745T	
Crychem plates	Hampton research	HR3-158	24-well sitting drop plate
Inorganic pyrophosphatase	Sigma	10108987001	
Ammonium molybdate solution	Sigma	13106-76-8	
L-ascorbic acid	Sigma	50-81-7	
NTP substrate	Startagene	200415-51	
Spectrophotometer	Biotek	SynergyH1	microplate reader
GraphPad Prism 5	GraphPad	Prism 5 for Window	