

Product/Protein :	2x MidasMix with <i>Thermus aquaticus</i> DNA Polymerase I
Lot # :	030507BM
Concentration :	200 reactions, 250 units/ml
Package format :	2000µl = 4x 500 µl Midasmix. This all-in-one reaction mix is 2x in reaction buffer and nucleotides. All you need to add is your primer/template mix in an equal volume of water.
1X Reaction Conditions:	75mM Tris pH 8.8 2mM MgCl₂ 20mM (NH₄)₂SO₄ 0.01%v/v Tween 20 0.22mM dNTP 125 units/ml Taq Polymerase
Description :	This convenient, easy to use 2x formulation combines Taq DNA polymerase , buffer and all of the reaction components required for Taq mediated DNA amplification . The 2x formulation allows complete control of final reaction volume. Simply add template and primers mix and amplify.
Protein Uses :	Primer extension (2) , polymerase chain reaction (1,5) , DNA sequencing (3,4) and site-directed mutagenesis.
Properties :	The enzyme features strand displacement capability , an error rate of one in @4.5x10⁴ bases and has low 5'-3' exonuclease activity. Like other DNA polymerases without 3'-5' exonuclease activity, <i>Taq</i> DNA Polymerase exhibits deoxynucleotidyl transferase activity, which results in the addition of extra adenines at the 3'-end of PCR products.

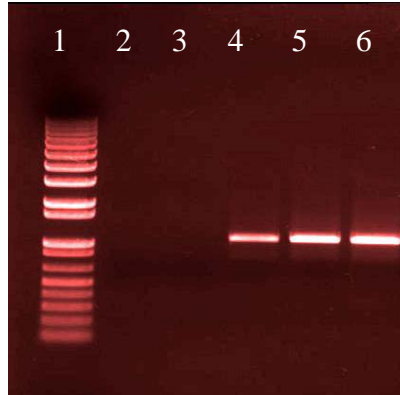


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125 units/ml Taq Polymerase



40 cycles amplification

Lane **Sample**

1. 1 kb + Marker
2. No template control
3. No template control
4. 5pg Bact. Genomic
5. 20pg Bact. Genomic
6. 100pg Bact. Genomic

Quality Assessment	Assay	Result
dsDNA endonuclease	Degrade ΦX174 RF	None Detected
ssDNA endonuclease	Degrade M13mp18	None Detected
5' dsDNA exonuclease	Removal of labeled nucleotide from 5' end of a dsDNA oligonucleotide	None Detected
5' ssDNA exonuclease	Removal of labeled nucleotide from 5' end of a ssDNA oligonucleotide	Active
3' ssDNA+dsDNA exonuclease	Removal of labeled nucleotide from 3' end of a ssDNA or a dsDNA oligonucleotide	None Detected
unit functional assay	1 unit incorporates 10nMol ³² P dCTP into acid insoluble material in 30 minutes at 74°C using activated salmon testes DNA as substrate	Greater than 100,000 units/mg protein

1. Cha, R.S. and Thilly, W.G. (1995) in: PCR Primer, Dieffenbach, C.W. and Dveksler, G.S. (eds.), CSH Press, New York, 37..
2. Eckert KA, and Kunkel TA. Nucleic Acids Res. (1990), 18(13), 3739-44.
3. Ishino, Y et al. (1994) J. Biochem. 116 (5), 1019-1024
4. Kusukawa N et al. Biotechniques. 1990 9(1), 66-8, 70, 72.
5. Schmidt T. M. et al. Biotechniques. (1991) 11(2):176-7

