

Product Information

KOD S⁺ DNA Polymerase
Catalog No.: 40301

Product Name: KOD S⁺ DNA Polymerase

Description

KOD S⁺ DNA polymerase is one of the most efficient thermostable DNA Polymerases with higher accuracy and elongation velocity from *Thermococcus kodakaraensis*. Leadgene KOD S⁺ DNA Polymerase exhibits 3'-5' exonuclease (proofreading) activity that enables the polymerase to correct nucleotide incorporation errors. It has no 5'-3' exonuclease activity. This product is recombinant KOD DNA polymerase expressed in E.coli and purified to homogeneity. The enzyme generates blunt-ended PCR products suitable for cloning with any blunt-ended cloning method.

Concentration	Package size	Storage
5 U/μL	250 U/set	-20°C

Reaction Mixture Set Up

Component	Condition
10X KOD PCR Buffer	2.5 μL [#]
10 mM dNTPs (Cat. No. 4007160)	1 μL
Template DNA	10 pg -100 ng [†]
Primer F (10 μM)	0.5-1 μL
Primer R (10 μM)	0.5-1 μL
KOD S ⁺ DNA Polymerase	2.5-5 U
DMSO (optional in GC-rich or long template amplification)	2-5%
ddH ₂ O to final volume	25 μL

[#]Additional 0.5-2 mM Mg²⁺ could be optimized.

[†]For plasmid or viral templates: 10 pg - 1 ng

For genomic or cDNA templates: 1 ng - 100 ng

Recommended thermal cycling conditions

For "Phage", "Plasmid", and "Genomic" DNA template

Temperature	Time	Number of Cycles
94°C	2 min	1
94°C	20 sec	25-30
Tm-(3-5)°C	20 sec	
72°C	1-2 kb/30 sec	1
72°C	5-10 min	

For cDNA template

Temperature	Time	Number of Cycles
94°C	2 min	1
94°C	20 sec	25-30
Tm-(3-5)°C	20 sec	
68°C	1-2 kb/30 sec	1
68°C	5-10 min	

 For site-directed mutagenesis of plasmid[‡]

Temperature	Time	Number of Cycles
94°C	2 min	1
95°C	20 sec	10-15
68°C	1-2 kb/30 sec	

[‡]Primer Tm value should be >73 °C. Template DNA ~50 ng.

For research use only.

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