

KOD Hot Start DNA Polymerase High fidelity DNA polymerase designed for accurate PCR amplification of long strand and GC- rich DNA templates for cloning and cDNA amplification applications.

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Description

PCR involves replication of a DNA template by a thermostable DNA polymerase. The processivity, specificity, and fidelity of the polymerase enzyme used can influence the efficiency, reproducibility, and yield of the PCR reaction. High-fidelity PCR, utilizes a DNA polymerase with a low error rate and results in a high degree of accuracy in the replication of the DNA of interest. Fidelity is critical when accurate sequence amplification of the gene target is needed, for example, when direct sequencing or cloning for downstream protein expression. Unwarranted mutation could severely impact your studies. Our analysis has shown that KOD enzymes are an easy choice for fast, accurate and high-yielding PCR. EMD Millipore's molecular biologists work to develop and formulate polymerases offering the highest specificity, fidelity and yield during PCR amplification. In addition, optimized buffer compositions, convenient master mixes and cycling parameters provide additional ease of use and data reproducibility. KOD Hot Start DNA Polymerase* is a premixed complex of KOD DNA Polymerase and two monoclonal antibodies that inhibit the DNA polymerase and 3'->5' exonuclease activities at ambient temperatures (Mizuguchi 1999). KOD Hot Start amplifies genomic DNA templates up to 21 kb including GC-rich genes for PCR applications. KOD Hot Start combines the high fidelity, fast extension speed, and outstanding processivity of KOD with the high specificity of an antibody-mediated hot start. Non-specific amplification is reduced because mispriming events that can occur during setup and initial temperature increase are avoided. In addition, primer degradation during setup at room temperature due to exonuclease activity is effectively inhibited. KOD Hot Start DNA Polymerase generates blunt-ended PCR products suitable for cloning with the Novagen Perfectly Blunt(R) and LIC Vector Kits. Source: Recombinant Thermococcus kodakaraensis KOD1 DNA polymerase expressed in E. coli Concentration: 1.0 U/INicking activity: None detected Amplification efficiency: Functional PCR, inhibition of activity at 21C verified Storage: -20C* Manufactured by Toyobo and distributed by EMD. Not available in Japan. Note: Purchase of this product includes an immunity from suit under patents specified in the product insert to use only the amount purchased for the purchaser's own internal research. No other patents rights (such as 5' Nuclease Process patent rights) are conveyed expressly, by implication, or by estoppel. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California, 94404, USA.