

# NEW lower price for Proteinase K

As the major producer of Proteinase K worldwide, improved manufacturing processes have reduced our costs, and now we can pass the savings onto you. Without a reduction in the enzyme quality and purity that you expect, Proteinase K for techniques like nucleic acid purification and tissue digestion is now even more economical.

## Efficient removal of proteins from nucleic acid solutions


Proteinase K is a highly active 28.9-kDa serine protease isolated from the fungus *Tritirachium album*. The enzyme exhibits broad cleavage specificity on native and denatured proteins and is widely

used in the purification of DNA and RNA. Activity is increased in the presence of denaturants such as SDS (1%) and elevated temperature (50–60°C). Recommended working concentration is 50–100 µg/ml for protein removal and enzyme inactivation, and up to 2 mg/ml for tissue treatment. Proteinase K, Lyophilized powder can be prepared as a 20 mg/ml (approximately 600 mAU/ml) stock solution in water and stored in aliquots at –20°C. The enzyme is also available as a ready-to-use concentrated stock solution (600 mAU/ml) that is convenient for routine use in most applications. 1 mg of Proteinase K is the equivalent of

30 mAU (AU = Anson unit). Novagen® Proteinase K products are free of detectable DNase and RNase.

**Unit definition:** One AU is defined as the amount of enzyme that liberates 1.0 µmol (181 µg) of tyrosine from casein per minute at pH 7.5 at 37°C. ■

| Product                | Size   | Cat. No. | Price |
|------------------------|--------|----------|-------|
| <b>NEW LOWER PRICE</b> |        |          |       |
| Proteinase K           | 100 mg | 70663-4  | \$62  |
| Lyophilized            | 500 mg | 70663-5  | \$247 |
| Proteinase K Solution  | 2 ml   | 71049-3  | \$50  |
| 600 mAU/ml             | 10 ml  | 71049-4  | \$191 |

 Proteinase K is also available in bulk quantities

# NEW lower prices for NovaTaq™ and NovaTaq™ Hot Start DNA Polymerases

We can now offer you the same high quality NovaTaq™ and NovaTaq Hot Start DNA Polymerases at a lower price. In addition to having exceptional quality, these enzymes are licensed for PCR.

## NovaTaq DNA Polymerase

NovaTaq DNA Polymerase is a premium quality, recombinant form of *Thermus aquaticus* DNA polymerase, suitable for a wide range of PCR applications. To ensure the highest enzyme purity and reproducible performance, each preparation is extensively quality tested. NovaTaq DNA Polymerase has integral 5'→3' exonuclease activity and lacks 3'→5' exonuclease activity. The enzyme generates PCR products with 3'-dA overhangs\*, suitable for cloning with Novagen® Perfectly Blunt® and AccepTor™ Vector Kits. Included with

the polymerase is an optimized 10X NovaTaq Buffer with 15 mM MgCl<sub>2</sub> for routine amplification conditions, plus separate vials of 10X NovaTaq Buffer without MgCl<sub>2</sub>, and 25 mM MgCl<sub>2</sub> for convenient Mg<sup>2+</sup> optimization.

## NovaTaq Hot Start DNA Polymerase

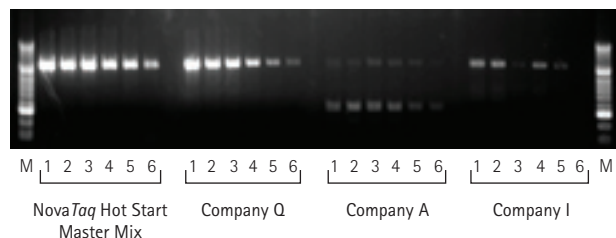
NovaTaq Hot Start DNA Polymerase, a chemically modified form of recombinant *Taq* DNA polymerase, is inactive at ambient temperature. Compared to standard *Taq* DNA polymerase, the hot start enzyme provides improved specificity, minimizing nonspecific amplification products, such as primer-dimers and misprimed products. The enzyme is activated by heat treatment (7–10 min at 95°C) before standard thermal cycling. The enzyme generates PCR products with 3'-dA overhangs\*, suit-

able for cloning with the Novagen Perfectly Blunt and AccepTor Vector Kits. Included with the hot start polymerase are 10X NovaTaq Hot Start Buffer, without MgCl<sub>2</sub>, and 25 mM MgCl<sub>2</sub> for convenient Mg<sup>2+</sup> optimization.

## PCR Kits and Master Mixes

The NovaTaq PCR Kit contains all reagents necessary for PCR amplification, except primers and template. The NovaTaq PCR Kit PLUS includes 1.5 ml 10X NovaTaq Optimization Buffer, for difficult templates, in addition to the regular NovaTaq PCR Kit reagents. For fast, convenient, and reproducible PCR set-up, NovaTaq PCR Master Mix and NovaTaq Hot Start Master Mix are available. Included with the ready-to-use 2X Master Mixes are separate vials of Mg<sup>2+</sup> and PCR Grade Water. ■

\*When using forms of *Taq* DNA Polymerase, the percentage of PCR products with 3'-dA overhangs in the reaction will vary, depending upon reaction conditions and DNA template. (Hu, G. 1993. *DNA Cell Biol.* 12, 763; Brownstein, J.M. et al., 1996. *Biotechniques* 20, 1004; Magnuson, V.L. et al., 1996. *Biotechniques* 21, 700.)



| M-Markers |                   |
|-----------|-------------------|
| Lane      | template DNA (pg) |
| 1         | 125.0             |
| 2         | 41.7              |
| 3         | 13.9              |
| 4         | 4.6               |
| 5         | 1.5               |
| 6         | 0.5               |

| Product                           | Size     | Cat. No. | Price |
|-----------------------------------|----------|----------|-------|
| NovaTaq™ DNA Polymerase           | 100 U    | 71003-3  | \$38  |
|                                   | 500 U    | 71003-4  | \$152 |
|                                   | 2500 U   | 71003-5  | \$608 |
| NovaTaq™ PCR Kit                  | 200 rxn  | 71005-3  | \$122 |
| NovaTaq™ PCR Kit PLUS             | 200 rxn  | 71006-3  | \$127 |
| NovaTaq™ PCR Master Mix           | 200 rxn  | 71007-3  | \$142 |
| NovaTaq™ Hot Start DNA Polymerase | 250 U    | 71091-3  | \$132 |
|                                   | 1250 U   | 71091-4  | \$528 |
| NovaTaq™ Hot Start Master Mix Kit | 200 rxn  | 71676-3  | \$175 |
|                                   | 1000 rxn | 71676-4  | \$780 |

## Hot Start Master Mix PCR Products

A 1-kbp fragment from lambda DNA was amplified using the indicated master mix in a 50-μl reaction. PCR cycling parameters were as follows: heat activation, 95°C for 8 min, 60°C for 1 min; PCR, 30 cycles at 95°C for 30 s, 60°C for 30 s, 72°C for 15 s; and final extension at 72°C for 10 min. Samples (equal volumes) were analyzed by agarose gel electrophoresis and stained with ethidium bromide.