Phoenix Hot Start Taq DNA Polymerase

How stable is Phoenix™ Hot Start Taq when incubated in a PCR reaction mix at room temperature?

Phoenix Hot Start Taq remains stable at room temperature for at least 72 hours when incubated in a PCR reaction mix containing 1X of the supplied, optimized Phoenix Hot Start Taq reaction buffer (standard or GC). Additionally, endpoint PCR tests on a smaller set of amplicons demonstrated functional stability after 20 days of room temperature incubation.

How can PCR cycling conditions be optimized for Phoenix Hot Start Taq?

General Taq protocols (see recommended cycling conditions on the Phoenix Hot Start Taq Product Information Sheet) are a good starting point. To fine-tune the annealing step, vary the temperature in 2°C increments, beginning about 10°C below the lower primer Tm and increasing up to approximately 5°C above the higher primer Tm. Phoenix Hot Start Taq is also compatible with Touchdown PCR cycling protocols.

Can Phoenix Hot Start Taq use cDNA as a template for PCR?

Yes.

Is Phoenix Hot Start Taq capable of multiplex PCR?

Yes. Phoenix Hot Start Taq can amplify multiple targets in a single 50 µl PCR reaction. Increasing the amount of polymerase (up to 2.5 U) may improve multiplex results.

How can I optimize Mg^{2+} conditions for a specific amplicon when using Phoenix Hot Start Taq and the supplied reaction buffer?

The supplied Phoenix Hot Start Taq buffers provide 2 mM Mg^{2+} in the final reaction. If needed, you can adjust the final Mg^{2+} concentration by adding a concentrated Mg^{2+} solution. Keep in mind that increasing Mg^{2+} levels may reduce PCR fidelity (1).

When should I use Phoenix Hot Start Taq GC reaction buffer?

The GC reaction buffer is recommended for challenging or GC-rich amplicons (≥ 55% GC content).

Ordering Information

Product	Contents	Cat. no.
Phoenix Hot Start Taq DNA Polymerase	500 U of Phoenix Hot Start Taq DNA Polymerase (0.10mL at 5,000 U/mL), 5x Phoenix Hot Start Taq Reaction Buffer (4 x 1.5 mL), and 5x Phoenix Hot Start Taq GC Reaction Buffer (2 x 1.5 mL)	P7590L

References

1. Eckert K and Kunkel TA. (1991) *Genome Research*, **1**, 17 - 24.
2. Frey B and Suppmann B (1995) *Biochemica*, **2**, 8 - 9.
3. Ralser M, et al. (2006) *Biochemical and Biophysical Research Communications*, **347**, 747 - 751.

Click on the QR code or visit **www.qiagen.com/enzymes** to learn more.

Need bulk, customized or optimized products for commercial purposes? We also offer support with logistics, compliance and more. Reach out to cooperate with QIAGEN Strategic Partnerships & OEM: **OEM@qiagen.com**.