

# HelixAmp™ Taq-Plus polymerase



Perfect System

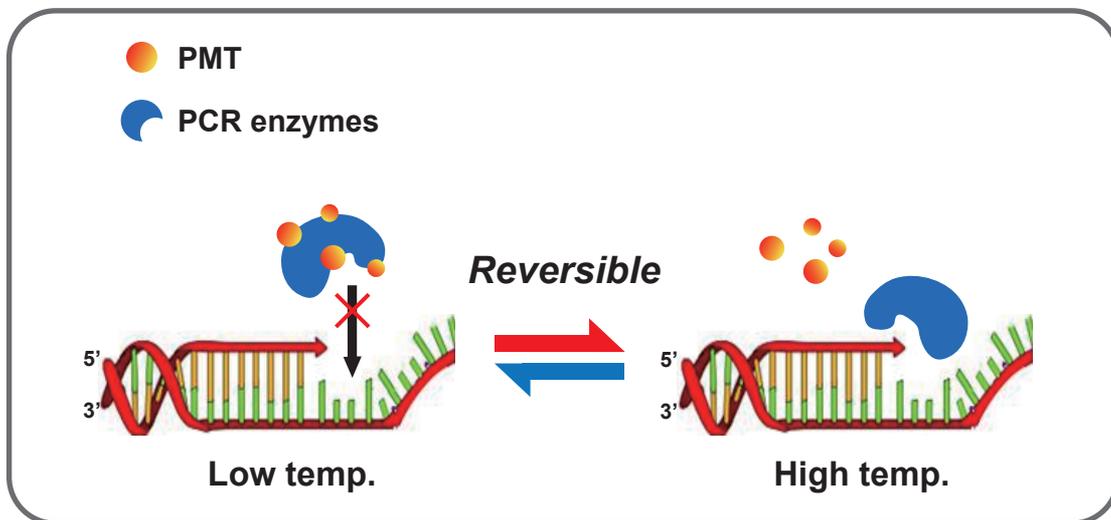


INNOBIZ



# Polymerase Modulator on Temperature (PMT) Technology

**Polymerase Modulator on Temperature (PMT) technology**, a noble PCR technology for high specific amplification and minimize the primer dimer formation. PMT, a chemical, is regarded to interact with the amino groups of *Taq* DNA polymerase and reducing its affinity to DNA and polymerization activity. The ionic status of PMT is altered by temperature and accordingly it is released from *Taq* DNA polymerase at higher temperature, above 50°C. This temperature dependent inhibition of PCR enzyme by PMT results high specific target amplification and minimizes the primer dimer production. In conjunction with classical antibody-mediated hot start methods, PMT maximizes the hot start PCR effects. This noble method, developed by NanoHelix Co., Ltd. is applied to NanoHelix's special enzymes. The PMT applied PCR enzymes amplify target DNAs at broad-range of annealing temperature and exert higher sensitivity and specificity than other conventional PCR enzymes.



Get more information from [www.nanohelix.net](http://www.nanohelix.net)



**HelixAmp™**

## **Taq-Plus polymerase**

**Taq-Plus polymerase** is an improved form of HelixAmp™ *Taq* polymerase and amplifies target DNA at broad-range of annealing temperature. NanoHelix's "PMT (Polymerase modulator on temperature) technology" is applied in the buffer system, which is effective to reduce primer-dimer formation and non-specific amplification during the PCR. HelixAmp™ *Taq-Plus* polymerase possesses the greater yield, processivity and fidelity than normal *Taq* polymerase. The fidelity of HelixAmp™ *Taq-Plus* polymerase is higher approximately 4 times than that of *Taq* polymerase. In case of PCR amplification of target DNA with high G+C content or structural problem, such as repeat sequence, the application of TuneUp™ solution improves the specificity and productivity of the reaction.

**TA cloning**

**PMT Technology**

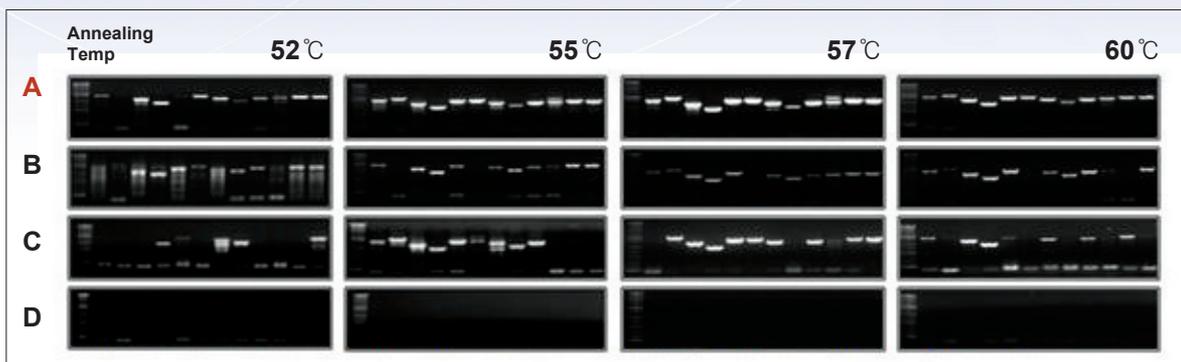
**Broad-range of annealing temperature**

**High productivity and sensitivity**

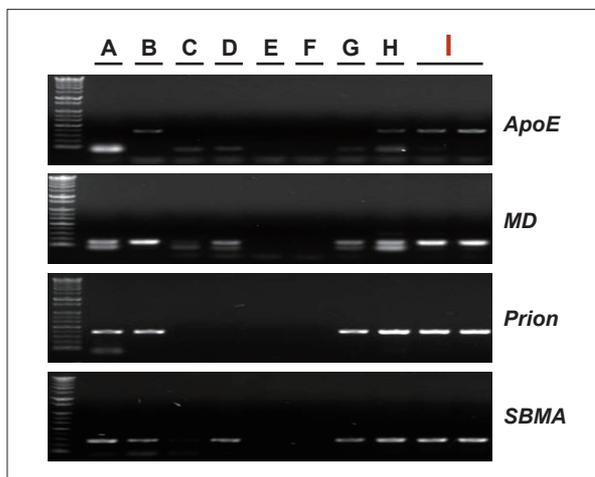
**Higher fidelity than *Taq* DNA polymerase**



## Experimental Data



**Comparison of HelixAmp™ Taq-Plus polymerase with other brand of Taq DNA polymerase.** 12 different primer sets designed from human genome were used in this PCR. PCR reactions were performed using 10 ng of human genomic DNA under the various annealing temperature. A : NanoHelix, B : Company S(Korea), C :Company T(Japan), D : Company I(Korea).



**Superior activity of HelixAmp™ Taq-Plus polymerase on difficult targets.** Different primer sets(*ApoE*, *MD*, *Prion*, *SBMA*) designed from the indicated region of human genome were used in this PCR. PCR was performed using 10 ng of human genomic DNA. A: Company T(Japan), B: Company T(Japan), C: Company I(Korea), D: Company I(Korea), E: Company B(Germany), F: Company B(Germany), G: Company I(USA), H: NanoHelix(*Taq*), I: NanoHelix(*Taq-Plus*).

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## Ordering Information

<b>Product</b>	<b>Size</b>	<b>Cat. No.</b>
HelixAmp™ <i>Taq-Plus</i> polymerase	250 rx	TP250
HelixAmp™ <i>Taq-Plus</i> polymerase	500 rx	TP500
HelixAmp™ <i>Taq-Plus</i> polymerase	2,500 rx	TP2500

Order : +82-42-867-9055

E-mail : [sale@nanohelix.net](mailto:sale@nanohelix.net)

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