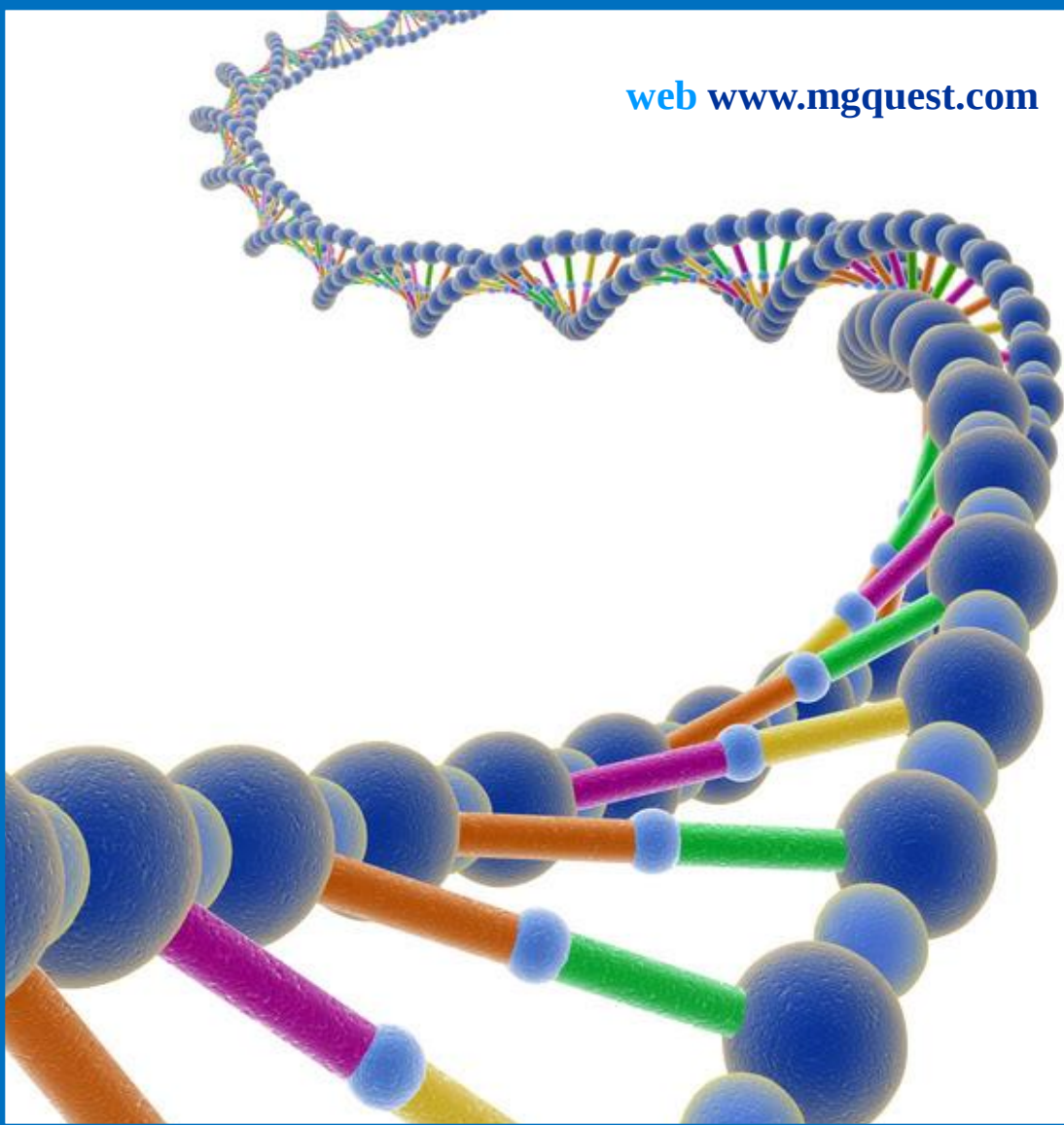


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**MOLECULAR BIOLOGY
CATALOG**

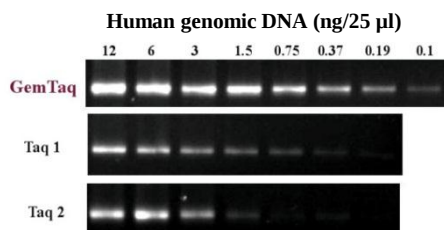
2012

GemTaq™ DNA Polymerase

GemTaq™ DNA Polymerase is a special formulation of standard Taq DNA Polymerase that features significantly improved amplifications of DNA fragments. GemTaq™ DNA Polymerase has an elongation rate higher than regular Taq DNA Polymerase, resulting in robust yields and greater sensitivity of PCR amplifications within a short reaction time.

Advantages

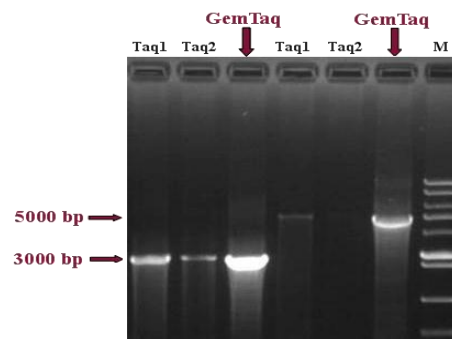
- Higher efficiency and greater sensitivity in a wide range of PCR assays when compared to a standard Taq DNA Polymerase.
- Suited for amplifications of long DNA fragments.
- Shorter reaction times due to higher elongation rate.
- Unbeatable value in terms of cost per unit and performance.



The β -Actin gene fragment (850 bp) was amplified in 25 μ l from the indicated amounts of human genomic DNA as a template. Each PCR reaction was performed using 0.25 U of GemTaq™ DNA Polymerase and standard Taq DNA Polymerases (Taq 1 from competitor 1, Taq 2 from competitor 2) in supplied Reaction Buffers, respectively during 33 cycles.

Applications

- Routine and high-throughput PCR.
- Primer extension.
- TA cloning.



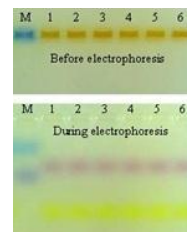
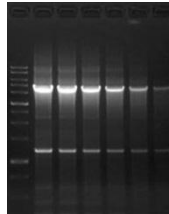
Lambda DNA fragments (3000 bp and 5000 bp) were amplified in 50 μ l with 0.5 U of GemTaq™ DNA Polymerase and standard Taq DNA polymerases in supplied Reaction Buffers, respectively. Each PCR reaction was performed from 5 ng of Lambda DNA as a template during 28 cycles.

Product	Catalog #	Size	Conc.	Price USD
GemTaq™ DNA Polymerase and 5xReaction Buffer (with 7.5 mM Mg ²⁺)	EP012	400 units	5 u/ μ l	\$ 45.00
	EP013	2,000 units	5 u/ μ l	\$ 175.00
	EP014	5,000 units	5 u/ μ l	\$ 400.00
	EP015	15,000 units	5 u/ μ l	\$ 1,050.00
GemTaq™ DNA Polymerase and Colored 5xReaction Buffer (with 7.5 mM Mg ²⁺)	EP022	400 units	5 u/ μ l	\$ 45.00
	EP023	2,000 units	5 u/ μ l	\$ 175.00
	EP024	5,000 units	5 u/ μ l	\$ 400.00
	EP025	15,000 units	5 u/ μ l	\$ 1,050.00
GemTaq™ 5xMaster Mix	EPM11	0.5 ml (100 reactions)		\$ 25.00
	EPM12	2.5 ml (500 reactions)		\$ 100.00
	EPM13	5.0 ml (1,000 reactions)		\$ 180.00
	EPM14	10.0 ml (2,000 reactions)		\$ 320.00
GemTaq™ Colored 5xMaster Mix	EPM21	0.5 ml (100 reactions)		\$ 25.00
	EPM22	2.5 ml (500 reactions)		\$ 100.00
	EPM23	5.0 ml (1,000 reactions)		\$ 180.00
	EPM24	10.0 ml (2,000 reactions)		\$ 320.00

Colored 5xReaction Buffer

The Colored 5xReaction Buffer for amplifications was specially formulated to provide direct loading of the PCR samples onto gels without the need to add a loading sample buffer. It contains a compound that increases sample density for electrophoresis and two dyes (Red and Yellow) that separate during electrophoresis to allow for easy monitoring. The Red and Yellow dyes migrate at the same rate as 800-1000 bp DNA fragments and 20-30 bp DNA fragments in a 1% agarose gel, respectively.

M 1 2 3 4 5 6



Lambda DNA fragment (5000 bp) was amplified in 50 μ l with 2U (lane 1), 1.25U (lane 2), 0.83U (lane 3), 0.55U (lane 4), 0.37U (lane 5) and 0.25U (lane 6) of GemTaq™ DNA Polymerase in the Colored Reaction Buffer. Each PCR reaction was performed from 2 ng of Lambda DNA as a template during 30 cycles. Lane M: 1 kb DNA ladder.

FOR LABORATORY USE ONLY

Prices are valid for US customers.

GemTaq™ Hot Start DNA Polymerase

GemTaq™ Hot Start DNA Polymerase is a heat-activated high-performance proprietary formulation of GemTaq™ DNA Polymerase. The modified polymerase activity is quickly restored during the initial denaturation step allowing for a hot-start PCR. Therefore GemTaq™ Hot Start DNA Polymerase provides improved specificity and very high PCR sensitivity by eliminating the presence of non-specifics products.

Advantages

- Ultra-high specificity.
- Fast activation.
- Recommended for low copy assays.
- Amplifies fragments up to 5 kb.
- Cost-effective.

Applications

- Hot start PCR.
- Low-copy target.
- High throughput PCR applications.
- Complex genomic templates.
- TA cloning.

Product	Catalog #	Size	Conc.	Price USD
GemTaq™ Hot Start DNA Polymerase and 5xReaction Buffer (with 7.5 mM Mg ²⁺)	EP032	400 units	5 u/μl	\$ 55.00
	EP033	2,000 units	5 u/μl	\$ 220.00
	EP034	5,000 units	5 u/μl	\$ 500.00
	EP035	15,000 units	5 u/μl	\$ 1,300.00
GemTaq™ Hot Start DNA Polymerase and Colored 5xReaction Buffer (with 7.5 mM Mg ²⁺)	EP042	400 units	5 u/μl	\$ 55.00
	EP043	2,000 units	5 u/μl	\$ 220.00
	EP044	5,000 units	5 u/μl	\$ 500.00
	EP045	15,000 units	5 u/μl	\$ 1,300.00
GemTaq™ Hot Start 5xMaster Mix	EPM31	0.5 ml (100 reactions)		\$ 30.00
	EPM32	2.5 ml (500 reactions)		\$ 130.00
	EPM33	5.0 ml (1,000 reactions)		\$ 225.00
	EPM34	10.0 ml (2,000 reactions)		\$ 400.00
GemTaq™ Hot Start Colored 5xMaster Mix	EPM41	0.5 ml (100 reactions)		\$ 30.00
	EPM42	2.5 ml (500 reactions)		\$ 130.00
	EPM43	5.0 ml (1,000 reactions)		\$ 225.00
	EPM44	10.0 ml (2,000 reactions)		\$ 400.00

SNPase Hot Start DNA Polymerase

SNPase Hot Start is a thermostable DNA polymerase designed for a single-nucleotide polymorphism (SNP) detection. This enzyme has only 5'-3' polymerase activity and lacks exonuclease activity. SNPase Hot Start DNA Polymerase provides very high enzymatic specificity and high fidelity incorporation of dNTPs and ddNTPs that is 10-15 times higher than a regular *Taq* DNA Polymerase. The enzyme has a modified polymerase activity that is restored during the initial denaturation step allowing for a hot-start PCR and eliminates the presence of non-specifics products. **SNPase was recognized as one of the best Polymerases in SNP detection by allele-specific PCR and mini-sequencing.**

Advantages

- High sensitivity to mismatches at 3'-end of primers.
- High fidelity of dNTPs and ddNTPs incorporation.
- Lack of 5'-3' and 3'-5' exonuclease activity.
- High specificity, low level of background PCR.
- Fast activation (5-10 sec, 95°C).
- TA cloning.

Applications

- SNP- genotyping, allele specific PCR, allele specific primer extension, mini-sequencing.
- High fidelity PCR (up to 1000 bp).
- Multiplex PCR.
- Real Time PCR with intercalating dyes (SYBR Green, Eva Green).

Product	Catalog #	Size	Conc.	Price USD
SNPase Hot Start DNA Polymerase and 5xReaction Buffer (with 12.5 mM Mg ²⁺)	EP052	400 units	12 u/μl	\$ 60.00
	EP053	2,000 units	12 u/μl	\$ 240.00
	EP054	5,000 units	12 u/μl	\$ 520.00

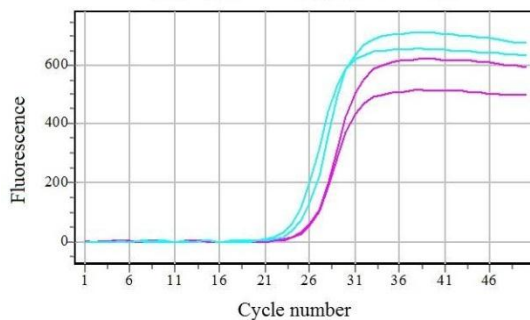
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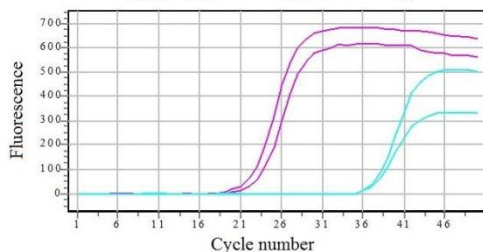
SNPase Hot Start in allele specific PCR

Gene MTHFR1298 (a→c), qPCR mix with SYBR green

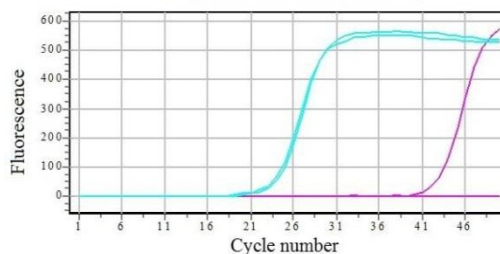
ac (red – allele A, blue – allele C)



aa (red – allele A, blue – allele C)



cc (red – allele A, blue – allele C)



MGQuest is a fast growing private American company located in the beautiful state of Washington.

The company offers products and services for research in life sciences. Our goal is to provide research communities with the highest quality products at very competitive prices.

We support advances in science by inventing and marketing products that accelerate and improve research.



web www.mgquest.com

Email sales@mgquest.com

Email techserv@mgquest.com

USA

P.O. Box 5739

Lynnwood WA

98046-5739