ACCUZYME™ DNA Polymerase and Mix

Achieving Greater Accuracy

- **Efficient:** highly-productive target amplification and removal of 3' A overhangs.
- **Accurate:** possesses 3' - 5' proofreading exonuclease activity that delivers an error rate of 3.0 x 10^{-6} for increased PCR fidelity versus Taq DNA polymerase
- **Sensitive:** high-yield amplification from limiting amounts of human, animal and plant template DNA
- **Robust:** developed for reliable amplification of even the most challenging targets, including genomic DNA and GC-rich targets
- **Flexible:** ideal for amplifying any target up to 5 kb with DNA extracted from mammalian tissue samples
- **Convenient:** advanced buffering system minimizes the requirements for PCR optimization, thereby reducing time-to-results and eliminating the cost of unnecessary repeats

ACCUZYME™ is a robust, efficient, proofreading enzyme that gives increased fidelity in high-yield PCR, for use in all routine cloning applications.

ACCUZYME is a proprietary proofreading enzyme that offers increased-fidelity and high PCR yield, even in demanding applications. ACCUZYME has an error-rate of 3.0 x 10^{-6} and results in blunt-ended amplicons up to 5 kb in length, making it ideal for use in cloning and site-directed mutagenesis.

ACCUZYME is supplied with a buffering system that provides ideal conditions for most PCR assays. Consequently, the cost and effort typically associated with optimizing assay performance is often eliminated. In circumstances where further optimization is required to improve PCR specificity and/or yield, ACCUZYME includes an additional vial of $MgCl_2$.

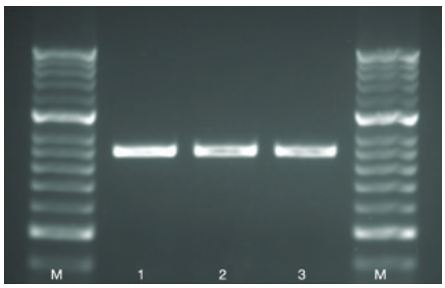

Fig. 1 Verification of the plasmid integration with colony PCR
E. coli transformed with M13 carrying a 700 bp insert was plated out. 3 colonies were selected with tooth-picks, incubated in water at 99 °C for 2 min and used in replicate PCR reactions containing 2.5 units of ACCUZYME DNA Polymerase and 2.5 mM $MgCl_2$ (lanes 1-3, HyperLadder 50bp (M)), under recommended PCR cycling conditions. ACCUZYME provided consistently high-yield and specific amplification across all replicates.

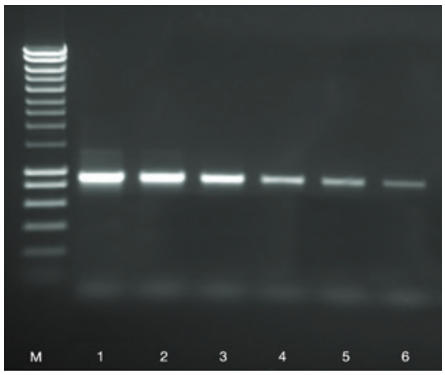

Fig. 2 Robust amplification with low template concentrations
An 800 bp fragment of the human angiotensin receptor II gene was amplified using ACCUZYME Mix. A 10-fold serial dilution of human genomic DNA (500 ng – 5 pg, lane 1-6 respectively (HyperLadder 1kb (M)) containing 2.5 mM $MgCl_2$, was amplified using recommended PCR cycling conditions. The results illustrate the high sensitivity of ACCUZYME Mix with low concentrations of input DNA.

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APPLICATIONS

- High-fidelity PCR
- Routine cloning applications requiring increased PCR yield
- Blunt-end cloning
- Site-directed mutagenesis

PREMIX FOR EASY SET-UP

ACCUZYME Mix dramatically reduces the time needed to set up reactions, thereby minimizing the risk of contamination. Greater efficiency and reproducibility (Fig. 2) are achieved by reducing the number of pipetting steps that often lead to variation in reaction set-up.

> “I really like ACCUZYME Mix because it’s worked for me in multiple applications, including site-directed mutagenesis and regular PCR amplification of genomic DNA samples. It’s convenient and it works for the science that I’m doing, so I would give it a thumbs-up!”
>
> **KRISTINA MARINAK, WVU CANCER INSTITUTE, WEST VIRGINIA UNIVERSITY**

Ordering Information

ACCUZYME™ DNA Polymerase and Mix	Size	Cat. #
ACCUZYME DNA Polymerase	500 Units	BIO-21052
ACCUZYME Mix	500 Reactions	BIO-25028

For related products such as nucleotides, agarose and molecular weight markers visit **www.bioline.com**

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