TargetEx dUTPase (from *Pfu*) 1.0 mg/mL

Catalogue Number: TGX-014-BS/-BM/-BL

INTRODUCTION

TargetEx dUTPase (from *Pyrococcus furiosus*) is a thermostable dUTP pyrophosphatase that hydrolyzes dUTP into dUMP and inorganic pyrophosphate (PPi). During PCR cycling, thermally promoted nucleotide degradation and deamination reactions may lead to the accumulation of uracil-containing nucleotide species, mainly dUTP. By efficiently hydrolyzing dUTP, the enzyme reduces the dUTP/dTTP ratio and prevents the misincorporation of uracil into DNA, thereby maintaining DNA replication fidelity. The enzyme improves PCR efficiency by eliminating forming or contaminating dUTP and reducing mutation rates, resulting in higher yield and improved accuracy.

APPLICATIONS

- High-fidelity PCR amplification
- dUTP removal during PCR reaction
- dUTP removal from dNTP mixes
- Applications requiring improved DNA integrity and reduced mutation frequency

STORAGE AND STABILITY

- Store at −20 °C
- Avoid repeated freeze–thaw cycles
- Aliquot upon first use for optimal stability

RECOMMENDED USAGE

dUTPase can be added directly to PCR reaction mixtures to enhance amplification quality.

For convenient handling, dilute the stock enzyme to an appropriate working concentration prior to use. Optimal conditions may vary depending on the experimental setup; both enzyme concentration and buffer composition should be empirically optimized.

If you have any questions or need further information, please feel free to contact us at **info@targetex.com**!