



For research use only

ISO9001

Thermostable UTPase

Product	Quantity	Cat. No.	Remarks
Thermostable UTPase	50 μg	EBT-3041	0.5 $\mu\text{g}/\mu\text{l}$

Description

Thermostable dUTPase (*pyrococcus fruriosus*) was prepared and purified from *E.coli strain*. dUTPase is specific for dUTP and is critical for the fidelity of DNA replication and repair. dUTPase hydrolyzes dUTP to dUMP and pyrophosphate, simultaneously reducing dUTP levels and providing the dUMP for dTTP biosynthesis.

Thermostable dUTPase used for PCR with Pfu DNA polymerase improves the efficiency and longer targets of PCR reaction.

Concentration & Storage Condition

0.5 $\mu\text{g}/\mu\text{l}$. Store at -20°C .

Storage Buffer

20mM Tris-HCl (pH 8.2), 1mM DTT, 0.1mM EDTA, 100mM KCl, 0.1% Nonidet P40, 0.1% Tween 20 and 50% glycerol

Unit Definition

One unit of enzyme catalyzes hadrylization of 10 nmole of dUTP to dUMP in 1 hour at 85°C .

Activity

- (A) Measured by its ability to hydrolyze dUTP to dUMP in reaction buffer 20mM Hepers pH 7.5, 150mM KCl, 5mM MgCl_2 , 10mM dUTP at 85°C for 1 hour. The PPI production was quantified by using the enzymatic determination kit from Sigma.
- (B) Enhancing PCR amplication: 50ul of Pfu PCR reaction system with 1-3u of dUTPase to amplify genomic DNA target up to 15-19 kb in length.

QC Tests

Activity, exo and endonuclease activity test, SDS-PAGE purity, performance tests.



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