A&A BIOTECHNOLOGY
innovating life science

Manual

Tornado™ DNAse

Recombined engineered DNAse I with increased processivity.

catalog #	size
1009-10T	1000 U
1009-50T	5000 U

For research use only.

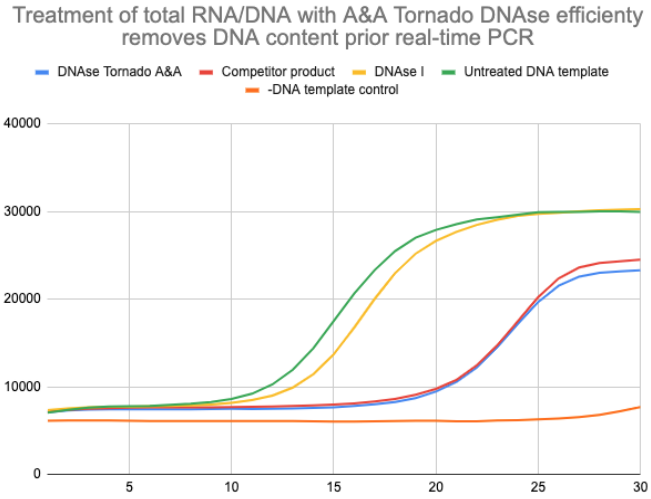
Guarantee

A&A Biotechnology provides guarantee on this product.
The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Advantages

- removes up to 70x more of the input DNA template than the wild-type DNAse I
- efficiently cleavage DNA in salted samples up to 0.3 M range



Real time PCR for *16S RNA* (multicopy) gene product performed on BioRad® CFX® instrument

Description

Tornado™ DNAse (RNase-free) is an endonuclease that digests ssDNA, dsDNA and DNA in DNA-RNA complexes. The enzyme activity is strictly dependent on Ca^{2+} and is activated by Mg^{2+} ions. The recombined enzyme is purified from *P. pastoris* (*K.phaffii*) expressing bovine pancreas modified DNAse I gene.
Tornado™ DNAse contains an additional domain responsible for the effective binding of a substrate DNA. The result is a versatile nuclease that possesses remarkably higher affinity towards dsDNA, even in the nM range of the DNA concentration.

Applications

- removal of contaminating DNA from RNA samples
- removal DNA matrix post i*n vitro* transcription
- study of DNA-protein interactions by DNase I footprinting
- preventing false positive PCR results in one-step RT-qPCR

Contents

	1009-10T	1009-50T	storage
Tornado™ DNAse (2 U/µl) storage buffer: 10 mM Tris-HCl, pH 7.5, 2 mM $CaCl_2$, 50% glicerol (v/v)	1000 U	5 x 1000 U	-20 °C
Tornado™ reaction buffer 10x Tornado™ reaction buffer: 100 mM Tris-HCl, pH 7,5, 1M NaCl, 25 mM $MgCl_2$, 10 mM $CaCl_2$	1 ml	5 x 1 ml	-20 °C

Unit definition

One unit is the amount of enzyme required to completely degrade 1 µg of DNA Lambda/HinDIII in 10 min at 37°C.

Important note

Thermal inactivation of **Tornado™ DNAse** may cause partial hydrolysis of RNA. We recommend in this situation cleaning the RNA with the Clean-Up RNA Concentrator kit, point 3. of the protocol (# 039-25C, 039-100C).

Protocol - removal of contaminating genomic DNA from RNA

1. Prepare sterile, RNAse-free tube.
2. Add:

component	reaction volume 50 µl
RNA	10 µg
Tornado™ reaction buffer	5 µl
Tornado™ DNAse	2 U (1 µl)
Sterile water	up to 50 µl

3. Incubate for 30 min at 37 °C.
4. Add 1 µl of 100 mM EDTA (final concentration: 5 mM).
5. Inactivation: Incubate for 10 min at 65 °C.

A&A BIOTECHNOLOGY

innovating life science

A&A Biotechnology, Strzelca 40, 80-299 Gdańsk, Poland
phone: +48 883 323 761, +48 600 776 268
info@aabiot.com, www.aabiot.com

version 2023-2