CYRN34-CHANGYU DNase I On-Column Digestion Kit (RNase-free)

Catalog number	Package
CYRN3401	50 preps

Storage: DNase Buffer at -20 °C; Deproteinization Buffer RW1 at room temperature or 4 °C; RNase-free DNase at -20 °C. Avoid repeated freeze-thaw cycles.

Kit components

Component	CYRN3401
DNase Buffer	1.25 ml × 2
RNase-free DNase I	0.25 ml
Deproteinization Buffer RW1	40 ml

Description

No total-RNA procedure can completely avoid trace DNA residue. The EASYspin buffer system and silica membrane remove most DNA contamination, so DNase I digestion is generally unnecessary. For sensitive downstream applications that require removal of trace DNA, this kit digests residual DNA directly on the spin column; the purified RNA is then eluted and used directly. The kit is compatible with all silica-membrane spin-column RNA extraction kits.

Features

Simple and rapid: optimized conditions digest residual DNA on the silica membrane in about 15 minutes.

RNase-free to preserve RNA integrity.

Broad compatibility: can be integrated into any silica-membrane spin-column RNA extraction kit, avoiding separate DNA removal after total RNA isolation.

Notes

Note: DNase is very sensitive and prone to physical denaturation and loss of activity. Do not vortex DNase I or the working solution; mix gently by pipetting or inversion. Prepare fresh working solution before each RNA extraction. The DNase I buffer is designed specifically for on-column digestion with RNase-free DNase I; standard 10× DNase buffers are not compatible with on-membrane digestion and cannot substitute for it.

❖ Procedure

1. Perform the normal RNA extraction procedure until the lysate has been loaded onto the column and centrifuged completely (RNA and residual DNA are bound to the silica membrane). Perform the following steps before adding Deproteinization Buffer RW1.

2. Mix 45 µl of DNase Buffer and 5 µl of RNase-free DNase I gently in a centrifuge tube to prepare the working solution (scale up proportionally for multiple columns). If residual DNA is high and digestion is incomplete, increase the amount of enzyme proportionally (for example 90 µl of DNase Buffer and 10 µl of RNase-free DNase I).

3. Add 350 µl of Deproteinization Buffer RW1 to column RA, centrifuge at 12,000 rpm for 30 seconds, discard the flow-through and return the column to the collection tube.

4. Apply 50 μl of DNase I working solution to the centre of the membrane and leave at room temperature (20-30 °C) for 15 minutes. Apply the solution directly to the membrane; do not let it run onto the O-ring or the column wall.

5. Add 350 μl of Deproteinization Buffer RW1 to column RA, centrifuge at 12,000 rpm for 30-60 seconds, discard the flow-through and return the column to the collection tube.

6. Continue with the Wash Buffer RW step and the remaining steps. When using another supplier's kit, continue with its final wash step.

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.