

## Product Information

### DNA Removal Reagent Kit

**C/No.** K.RGT-9103-250U  
**Packaging** 250 U  
**Storage** - 20 °C

Apical Scientific Sdn Bhd  
7-1 to 7-4, Jalan SP 2/7  
Taman Serdang Perdana,  
43300 Seri Kembangan  
Selangor, Malaysia



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#### Description

DNA removal reagents allows the removal of DNA contaminations during RNA extraction. DNase I is responsible for DNA digestion and subsequently remove using DNase Removal Solution.

#### Source

DNase I is purified from bovine pancreas.

#### Applications

- RNA extraction
- cDNA synthesis

#### Components

- DNase I (1 U/ $\mu$ L)
- DNase Buffer with  $MgCl_2$
- DNase Removal Solution
- Nuclease-free Water

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#### Quality Control

##### Functionality Test

One unit of DNase I able to degrade 1  $\mu$ g of pUC19 plasmid in total reaction volume of 20  $\mu$ L at 37 °C for 10 minutes.

Treated RNA is tested with RT-qPCR.

##### RNase Activity

RNase contaminants not detected. In DNase I and DNase Removal Reagent.

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**Protocol**

<b>DNase Treatment</b>	<p>1. According to different amount of total RNA, prepare the DNase treatment reaction according to <b>Table 1</b> in nuclease-free 1.5 mL tubes.</p> <p><b>Table 1:</b> DNase Treatment for different amount of total RNA.</p> <table border="1"> <thead> <tr> <th>Component</th> <th>Amount A</th> <th>Amount B</th> <th>Amount C</th> </tr> </thead> <tbody> <tr> <td>RNA sample</td> <td>Up to 8.5 <math>\mu</math>L (5 <math>\mu</math>g – 2 <math>\mu</math>g)</td> <td>Up to 42.5 <math>\mu</math>L (25 <math>\mu</math>g – 10 <math>\mu</math>g)</td> <td>Up to 85 <math>\mu</math>L (50 <math>\mu</math>g – 20 <math>\mu</math>g)</td> </tr> <tr> <td>10X DNase Buffer with MgCl<sub>2</sub></td> <td>1 <math>\mu</math>L</td> <td>5 <math>\mu</math>L</td> <td>10 <math>\mu</math>L</td> </tr> <tr> <td>DNase I (1 U/<math>\mu</math>L)</td> <td>0.5 <math>\mu</math>L</td> <td>2.5 <math>\mu</math>L</td> <td>5 <math>\mu</math>L</td> </tr> <tr> <td>Nuclease-free water</td> <td>Adjust to reach the final volume</td> <td>Adjust to reach the final volume</td> <td>Adjust to reach the final volume</td> </tr> <tr> <td>Total Final Volume</td> <td>10 <math>\mu</math>L</td> <td>50 <math>\mu</math>L</td> <td>100 <math>\mu</math>L</td> </tr> </tbody> </table>	Component	Amount A	Amount B	Amount C	RNA sample	Up to 8.5 $\mu$ L (5 $\mu$ g – 2 $\mu$ g)	Up to 42.5 $\mu$ L (25 $\mu$ g – 10 $\mu$ g)	Up to 85 $\mu$ L (50 $\mu$ g – 20 $\mu$ g)	10X DNase Buffer with MgCl <sub>2</sub>	1 $\mu$ L	5 $\mu$ L	10 $\mu$ L	DNase I (1 U/ $\mu$ L)	0.5 $\mu$ L	2.5 $\mu$ L	5 $\mu$ L	Nuclease-free water	Adjust to reach the final volume	Adjust to reach the final volume	Adjust to reach the final volume	Total Final Volume	10 $\mu$ L	50 $\mu$ L	100 $\mu$ L
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<b>DNase Removal</b>	<p>2. Incubate the reaction at 37 °C for 30 minutes.</p>																								
	<p>3. For each <math>\mu</math>L of <b>DNase I</b> used in the DNase treatment reaction, add 2 <math>\mu</math>L of <b>DNase Removal Solution</b>. <i>Tips: Prior using the DNase Removal Solution, vortex the solution until it is completely suspended.</i></p> <p>4. Incubate the reaction at room temperature for 2 minutes. Invert 2 to 3 times gently to mix.</p> <p>5. Centrifuge at 3,500 rpm for 1 minute to pellet the DNase Removal Solution.</p> <p>6. Transfer the supernatant (which is DNase-free total RNA) into a new nuclease-free 1.5 mL tube. <i>Tips: Do not disturb the pelleted DNase Removal Solution.</i></p>																								