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DATA SHEET

Version: 2
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1. Identification

Product name **On membrane DNAse I set**
(2U/uL) 50rxn

Cat. No **EZ0020**

2. Description

On-membrane DNase I set is designed to be used specifically for on-column digestion of DNA during critical RNA purification procedures for downstream applications requiring DNA-free total RNA. This is an optional treatment as Canvax's spin column technology yields RNA with the majority of DNA removed. Without using on- membrane DNase treatment, the extracted RNA can be used in downstream applications which are not DNA sensitive. DNase I, is an endonuclease that cleaves DNA preferentially at phosphodiester linkages adjacent to a pyrimidine nucleotide, to release di-, tri-, and oligonucleotide products (on average producing tetranucleotides) with 5'-phosphorylated and 3'- hydroxylated ends. DNAse I act on single-stranded DNA, double-stranded DNA, RNA-DNA hybrids, and chromatin. DNase I requires bivalent cations (Mg^{2+} and Ca^{2+}) for maximal activity.

3. Composition

Item	Concentration	Quantity
DNAse I	2U*/uL	250 uL
OM Buffer	-	2,5 mL

*Unit Definition (Kunitz): One Kunitz unit is defined as the amount of DNase I that causes an increase in A260 of 0.001 per minute per ml at 25 °C, pH 5.0, with highly polymerized DNA as substrate.

4. Features

- RNAse-free
- Supplied with Buffer optimized for on-column DNase digestion. The composition and salt concentration of OM Buffer provides efficient on-column digestion of DNA and ensures that the RNA remains bound to the column. *

*Standard DNase buffers are not compatible with **On column DNase I** digestion. Use of other buffers may affect the binding of RNA to the Spin Column membrane, reducing RNA yield and integrity.

5. Quality Control

- Functionally tested.
- Confirmed absence of RNase activity.

6. Storage specifications

Storage at –20 °C in a non-frost-free freezer.

7. Applications

- Removal of residual genomic DNA from RNA samples.

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8. Further information

Product Use Limitations This product is developed, designed and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Disclaimer The information provided in this Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide and should not be taken as a warranty or quality specification. Canvax Reagents S.L.U. shall not be held liable for any damage resulting from handling or from contact with the above product.

On membrane DNase I Digestion Protocol

Prepare and load samples onto the spin column as indicated in the Standard protocols. The RNA is treated with DNase I while bound to the Spin Column membrane (Prewash the spin column before).

1. Follow the standard RNA Isolation protocol until the optional step for on-membrane DNase I digestion.
2. Prepare DNase I reaction solution in a 1.5 ml microcentrifuge tube (RNase-free) as follows: Prepare the following reaction mix for each Spin Colum:

Item	Quantity
DNAse I (2U/uL)	5 uL
OM Buffer	45 uL
Total volume	50 uL

3. Gently pipette the DNase I reaction solution to mix then add DNase I solution (50 µl) into the CENTER of the Spin column membrane.
4. Incubate the column for 10-15 minutes at room temperature (20-30°C) then proceed with the RNA Wash step.

Notes: DNase I is sensitive to physical denaturation. Mix gently by inverting the tube. Do not vortex