

## rDNase Set

### 1 Contents

rDNase Set	
REF	740963
rDNase, RNase-free (lyophilized)	1 vial (size D)
Reaction Buffer for rDNase	7 mL

### 2 Product description

The rDNase Set is intended for use with NucleoSpin® RNA kits. Furthermore, the rDNase Set is suitable for digestion of contaminating DNA within prepurified RNA preparations (e.g., phenol based RNA preparations), i.e. for DNA digestion in solution. The optimized Reaction Buffer for rDNase is highly recommended for best DNase performance.

The amount of rDNase and Reaction Buffer for rDNase is sufficient for the following numbers of on-column DNA digestions:

NucleoSpin® RNA II	50 preps
NucleoSpin® RNA/Protein	50 preps
NucleoSpin® TriPrep	50 preps
NucleoSpin® RNA Plant	50 preps
NucleoSpin® RNA Clean-up	50 preps
NucleoSpin® FFPE RNA	160 preps
NucleoSpin® RNA XS	160 preps
NucleoSpin® RNA Clean-up XS	160 preps
NucleoSpin® RNA L	20 preps
Digestion in solution:	50 x 1 mL crude RNA

For appropriate use of the rDNase and the Reaction Buffer for rDNase with above mentioned NucleoSpin® kits please refer to the individual protocols for detailed information. For DNA digestion in solution see section 6.

### 3 rDNase specifications

<b>Source:</b>	The rDNase is DNase I from bovine pancreas, recombinantly produced in <i>Pichia pastoris</i> without using any animal cells or other material derived from animals
<b>RNase activity:</b>	Not detectable. RNase activity was tested using a cleavable fluorescent labeled RNase substrate. No RNase activity was detectable after one hour incubation time.
<b>RNA integrity:</b>	Measurements with the Agilent 2100 Bioanalyzer show, that RNA integrity is untouched by the treatment with MACHEREY-NAGEL rDNase.

### 4 Storage conditions and preparation of working solution

rDNase, RNase-free: store lyophilised rDNase at +4 °C on arrival (stable for up to one year).

Reconstitution of lyophilized rDNase: Before first use of the kit, add indicated volume of RNase-free H<sub>2</sub>O (see below) to the rDNase vial and incubate for 1 min at room temperature. Gently swirl the vial to completely dissolve the rDNase. Be careful not to mix rDNase vigorously. rDNase is sensitive to mechanical agitation.

Dispense into aliquots and store at -20 °C. The frozen working solution is stable for 6 months. Do not freeze/thaw the aliquots more than three times.


## rDNase Set

REF	740963
rDNase, RNase-free (lyophilized)	1 vial (size D) add 540 µL RNase-free H <sub>2</sub> O

## 5 Safety instructions

rDNase contains hazardous contents. Wear gloves and goggles!

### 5.1 Risk and safety phrases

Component	Hazard contents	Hazard symbol	Risk phrases	Safety phrases
<i>Inhalt</i>	<i>Gefahrstoff</i>	<i>Gefahrstoffsymbol</i>	<i>R-Sätze</i>	<i>S-Sätze</i>
rDNase	rDNase, lyophilized <i>rDNase, lyophilisiert</i>	 Xn	R 42/43	S 22-24

#### Risk phrases

R 42/43 Irritating to eyes, respiratory system, and skin.  
*Reizt die Augen, Atmungsorgane und die Haut.*

#### Safety phrases


S 22 Do not breathe dust.  
*Staub nicht einatmen.*

S 24 Avoid contact with the skin.  
*Berührung mit der Haut vermeiden.*

### 5.2 GHS classification

Only harmful features must not be labeled with H and P phrases until 125 mL or 125 g.

*Mindergefährliche Eigenschaften müssen bis 125 mL oder 125 g nicht mit H- und P-Sätzen gekennzeichnet werden.*

Component	Hazard contents	GHS symbol	Hazard phrases	Precaution phrases
<i>Inhalt</i>	<i>Gefahrstoff</i>	<i>GHS Symbol</i>	<i>H-Sätze</i>	<i>P-Sätze</i>
RNaseA	rDNase, lyophilized  <i>rDNase, lyophilisiert</i>	 Danger <i>Gefahr</i>	317-334	261-304+341- 342+311-301+312- 280-302+352-333+313

#### Hazard phrases

H 317 May cause an allergic skin reaction.  
*Kann allergische Hautreaktionen verursachen.*

H 334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
*Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.*

#### Precaution phrases

P 261 Avoid breathing dust.  
*Einatmen von Staub vermeiden.*

P 280 Wear protective gloves/eye protection.  
*Schutzhandschuhe/Augenschutz tragen.*

P 302+352 IF ON SKIN: Wash with plenty of soap and water.  
*Bei Kontakt mit der Haut: Mit viel Wasser und Seife waschen.*

P 304+341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.  
*Bei Einatmen: Bei Atembeschwerden an die frische Luft bringen und in einer Position ruhigstellen, die das Atmen erleichtert.*

P 333+313 If skin irritation occurs: Get medical advice/attention.  
*Bei Hautreizung: Ärztlichen Rat einholen/ärztliche Hilfe hinzuziehen.*

P 342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
*Bei Symptomen der Atemwege: Giftinformationszentrum oder Arzt anrufen.*

For further information please see Material Safety Data Sheets ([www.mn-net.com](http://www.mn-net.com)).

## 6 Protocol for DNA digestion in solution

Several commonly used RNA purification methods co-purify DNA to a considerable extent (e.g., phenol based RNA purification). This often requires a subsequent removal of contaminating DNA and clean-up of the RNA from the reaction mixture.

DNA digestion in solution can efficiently destroy contaminating DNA. Subsequent repurification of the RNA (in order to remove buffer, salts, DNase, and digested DNA) is usually required.

The rDNase Set, containing high quality, recombinant RNase-free DNase (rDNase) and reaction buffer facilitates such a digestion in solution in order to remove even traces of contaminating DNA.

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### 1 Digest DNA (Reaction Setup)

Prepare enzyme-buffer premix: Add **1 µL reconstituted rDNase** to **10 µL Reaction Buffer for rDNase**.

Add 1/10 volume of the enzyme-buffer premix to the crude\* RNA solution (e.g., to 10 µL RNA add 1 µL of the premix comprising buffer and enzyme).

*\*Note: The crude RNA solution should be of low RNase activity, otherwise the RNA quality may be affected during incubation.*

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### 2 Incubation

Incubate for 10 min at 37°C.

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### 3 Repurification of RNA

Repurify RNA according to a suitable cleanup procedure, e.g. with the NucleoSpin® RNA Clean-up XS (REF 740903).

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## 7 Product use restriction / warranty

The rDNase Set is developed, designed, and sold for research purpose only.

All goods have to be checked immediately upon receipt. Damage claims are only acceptable in writing within 8 working days of receipt of all the goods. In case of legitimate claims the buyer can only require replacement of the goods. If replacement is not possible, the buyer has the right to choose between alternative products with same value or refund. The buyer cannot claim further compensation. All returns must first be authorized by us in writing. We offer a one year warranty from date of delivery that our products will conform to applicable specifications set forth in the product specifications if not sold to persons set forth in § 13 of German Civil Code. In such a case, the provisions of the German Civil Code shall be valid.

This warranty does not cover defects in or damage to the products which are due to improper installation or maintenance, misuse, neglect or any use other than ordinary commercial application.

Any discharge from liability will be void if a defect results from a heavily negligent or intentional breach of contract or if the buyer will be bodily injured as a result from a negligent or intentional breach.

The seller shall not be liable for the goods being fit for a particular purpose unless otherwise agreed upon, to which the buyer intends to put them.

This warranty is strictly exclusive. Any further damage compensation is impossible.

MACHEREY-NAGEL MAKES no other warranty of any kind whatsoever, and SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES OF ANY KIND OR NATURE WHATSOEVER; DIRECTLY OR INDIRECTLY; EXPRESS OR IMPLIED; INCLUDING; WITHOUT LIMITATION; AS TO THE SUITABILITY; REPRODUCIBILITY; DURABILITY; FITNESS FOR A PARTICULAR PURPOSE OR USE; MERCHANTABILITY; CONDITION; OR ANY OTHER MATTER WITH RESPECT TO MACHEREY-NAGEL PRODUCTS OR THE SALE OF MACHEREY-NAGEL PRODUCTS.



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