

rDNase Set

1 Contents

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

2 Product description

The rDNase Set is intended for digestion of DNA in solutions (e.g., prepurified RNA samples) or for use with NucleoSpin® RNA kits (on-column DNA digest). The optimized Reaction Buffer for rDNase is highly recommended for best DNase performance.

User option A: DNA digest in solution

The amount of rDNase and Reaction Buffer for rDNase is sufficient for DNA digestion in a total of 50 mL solution (e.g., 500 x 100 µL).

For preparation and storage of working solutions see section 4. For recommended protocol see section 6.

User option B: On-column digest with NucleoSpin® RNA kits

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

NucleoSpin® RNA	50 preps
NucleoSpin® RNA XS	90 preps
NucleoSpin® RNA Midi	100 preps
NucleoSpin® 8 RNA	240 preps
NucleoSpin® 96 RNA	240 preps
NucleoSpin® miRNA	60 preps
NucleoSpin® miRNA Plasma	120 preps
NucleoSpin® RNA/Protein	60 preps
NucleoSpin® TriPrep	60 preps
NucleoSpin® RNA Blood	60 preps
NucleoSpin® RNA Blood Midi	25 preps
NucleoSpin® 8 RNA Blood	240 preps
NucleoSpin® 96 RNA Blood	240 preps
NucleoSpin® RNA Plant	50 preps
NucleoSpin® RNA Plant and Fungi	40 preps
NucleoSpin® RNA Stool	85 preps
NucleoSpin® totalRNA FFPE	120 preps
NucleoSpin® totalRNA FFPE XS	240 preps

For preparation and storage of working solutions see section 4. For protocol please refer to the respective user manual.

3 rDNase specifications

Source: The rDNase is DNase I from bovine pancreas, recombinantly produced in *Pichia pastoris* without using any animal cells or other material derived from animals

RNase activity: Not detectable. RNase activity was tested using a cleavable fluorescent labeled RNase substrate. No RNase activity was detectable after one hour incubation time.

RNA integrity: 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 lyophilized rDNase at +4 °C upon arrival (stable for up to one year).

Reconstitution for user option A: DNA digest in solution

Before first use add 550 µL of RNase-free H₂O (see below) to the rDNase vial (size F) 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.

Reconstitution for user option B: On-column digest with NucleoSpin® RNA kits

For NucleoSpin® RNA Blood kit, NucleoSpin® totalRNA FFPE kits, NucleoSpin® miRNA Plasma kit, and NucleoSpin® miRNA kit, dissolve rDNase (Size F) in the delivered volume of Reaction Buffer for rDNase (7 mL). Store and use rDNase according to the respective user manual.

For correct use of rDNase and Reaction Buffer for rDNase in the other NucleoSpin® RNA kits mentioned in section 2 please refer to the respective manual for detailed information. In particular check the vial size of the rDNase mentioned in the manual protocol:

If the kit contained rDNase vials size C, then dissolve the rDNase from this set in 12.5 volumes of RNase-free H₂O indicated in the kit manual.

If the kit contained rDNase vials size D, then dissolve the rDNase from this set in 5 volumes of RNase-free H₂O indicated in the kit manual.

After dissolving the rDNase proceed according to the manual protocol.


Storage after reconstitution: Dispense reconstituted rDNase working solution 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.

5 Safety instructions

rDNase contains hazardous contents. Wear gloves and goggles!

Only harmful features must not be labeled with H and P phrases up to 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
Inhalt	Gefahrstoff	GHS-Symbol	H-Sätze	P-Sätze
rDNase	rDNase 90–100 % (Enzym) rDNase 90–100 % CAS 9003-98-9	 DANGER GEFAHR	334	261sh, 342+311

Hazard phrases

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 261sh Avoid breathing dust/vapors.
Einatmen von Staub/Dampf vermeiden.

P 342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Bei Symptomen der Atemwege: GIFTINFORMATIONSZENTRUM/Arzt anrufen.

For further information please see Material Safety Data Sheets
(www.mn-net.com).

Weiterführende Informationen finden Sie in den Sicherheitsdatenblättern (www.mn-net.com).

The symbol shown on labels refers to further safety information in this section.

Das auf Etiketten dargestellte Symbol weist auf weitere Sicherheitsinformationen dieses Kapitels hin.

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.

1 Digest DNA (Reaction Setup)

Prepare enzyme-buffer premix in a ratio of 1:10. Example: 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., add 1 µL of the enzyme-buffer premix to 10 µL RNA). In case of NucleoSpin 8/96 RNA and NucleoSpin 8/96 RNA Blood kits add 2/10 volume of the enzyme-buffer premix to the crude RNA solution.

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

2 Incubation

Incubate for 10 min at 37 °C.

3 Repurification of RNA

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

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.

If not superseded by these terms the current terms and conditions for the sale of goods (export version) are additionally valid.