MO BIO Laboratories, Inc.

Saving You Time For Life

DNase Max™ Kit

Catalog No. 15200-50

Quantity: 50 preps

INSTRUCTION MANUAL

Version 1232014

Please recycle

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KIT CONTENTS

Component	Amount
DNase Max™ Enzyme	55 µl
DNase Max™ Removal Resin	550 µl
10X DNase Max™ Buffer	550 µl
RNase-free Water	2 x 1 ml

KIT STORAGE

DNase Max™ Enzyme is stable for up to 6 months at room temperature with no loss of activity and for 2 years at 4°C without loss of activity. We recommend storing the DNase Max™ Kit at 4°C. Do not vortex the DNase Max™ Enzyme as it is sensitive to physical denaturation.

PRECAUTIONS

Please wear gloves when using this product. Avoid all skin contact with reagents in this kit. In case of contact, wash thoroughly with water. Do not ingest. See Material Safety Data Sheets for emergency procedures in case of accidental ingestion or contact. All MSDS information is available upon request (760-929-9911) or on our web site at www.mobio.com.

EQUIPMENT REQUIRED BUT NOT INCLUDED

- ☐ Microcentrifuge (13,000 x g)
- ☐ Pipet (volumes required 1.5 µl - 1000 µl)

OPTIONAL EQUIPMENT

- Vortex Genie® 2
- Vortex Adapter (MO BIO Catalog# 13000-V1-24)

INTRODUCTION

DNase Max™ Enzyme is a highly purified DNase I enzyme formulated in a unique and proprietary stabilization solution that provides long term stability at room temperature. The DNase Max™ Kit is used for the removal of genomic DNA contamination in RNA preparations. DNase Max™ Enzyme will remove up to 30 µg of DNA in 20 minutes using 10 units (1 µl) of enzyme. DNase Max™ Enzyme is stable for up to 6 months at room temperature with no loss of activity and for 2 years at 4°C without loss of activity.

Room temperature storage eliminates the need to aliquot and freeze stocks of DNase I enzyme and there is no concern about freeze thaw cycles that may decrease the activity of the enzyme.

PROTOCOL OVERVIEW

This kit contains a novel and highly specific resin which is used to bind and remove the DNase Max™ Enzyme and the divalent cations from the reaction, eliminating the need for heat or EDTA inactivation of the DNase. The RNA is ready to use immediately after resin treatment.

This kit is for research purposes only. Not for diagnostic use.

PROTOCOL

DNase Max™ Kit

Catalog No. 15200-50

Please wear gloves at all times

Important Notes Before Starting:

- DO NOT VORTEX the DNase Max™ Enzyme. It will denature the enzyme and decrease the activity.
- Just before use, resuspend the DNase Max™ Removal Resin by inversion or vortexing until the slurry is homogeneous

DNase Reaction

1. Mix 1 µl of the **DNase Max™ Enzyme** (10 units) and **10X DNase Max™ Buffer** to a final concentration of 1X in the digestion reaction.
2. Bring the reaction to final volume using the **RNase-free Water** provided. Mix by pipetting up and down.

   Example: For a 50 µl digestion reaction, add 5 µl of 10X DNase Max™ Buffer and 1 µl of DNase Max™ Enzyme. For a 100 µl reaction, use 10 µl of 10X DNase Max™ Buffer and 1 µl of DNase Max™ Enzyme.
3. Incubate the reaction at 37°C for 20 minutes.

DNase removal

4. Add 5 µl of homogeneous **DNase Max™ Removal Resin** per 10 units of DNase Max™ Enzyme in a 50 µl reaction, or 10 µl of slurry for every 100 µl reaction, whichever is greater.
5. Incubate for 10 minutes at room temperature. Invert or flick to resuspend every 1-2 minutes or place the tubes on a vortex adapter (MO BIO Cat# 13000-V1) attached to a Vortex Genie 2 and set the vortex between speed 5-6 to agitate the resin and promote binding of the DNase to the resin in the reaction. The solution should agitate without splashing.
6. Centrifuge 13,000 x g for 1 minute to pellet the resin.
7. Transfer the supernatant to a new tube, taking care not to transfer any of the resin.

The RNA is now ready to use for RT-PCR and further analysis.

Thank you for choosing the DNase Max™ Kit!

HINTS AND TROUBLESHOOTING GUIDE

RNA does not work in RT-PCR

- Check the RNA on an agarose gel before DNase digest to ensure that you are working with high quality RNA. We use a 1% TAE agarose gel to check 10 µl of RNA at a concentration range between 10-100 ng/µl.
- Make sure not to transfer the DNase Max™ Removal Resin into the final RNA. You may need to leave 1-2 µl of sample behind. If you disturb the resin bed when removing the DNase digested RNA, re-pellet the resin again to pack down before removing the RNA.
- If you need help with RNA isolation or assistance choosing an RNA Isolation product that gives the best quality and yields for your sample, please contact MO BIO Technical Support.

RNA still contains residual DNA

- When performing PCR or qPCR on DNase treated RNA to determine if DNA is still present, make sure to include a no template control reaction (water alone) to rule out contamination of DNA from another source.
- Prior to PCR analysis, perform an agarose gel of the RNA to determine the level of DNA contamination of your RNA. If more than 30 µg of DNA is present, it may be necessary to use more enzyme or to allow the digest to continue longer than 20 minutes. Quantification with picogreen may be used to determine the concentration of DNA present in the sample if necessary.
- If the 20 minute digest at 37oC does not completely remove all traces of DNA, the digest may be extended to 30 minutes. The DNase Max™ Enzyme will digest up to 30 µg of DNA with 10 units of enzyme in 20 minutes.
- Make sure that the DNase Max™ Enzyme] was not vortexed as this will decrease the activity of the enzyme. Vortexing during the removal step in the presence of the resin is ok.
- Make sure that the 10X DNase Max™ Buffer was added to the reaction at a final concentration of 1X. The highest activity of DNase is achieved using the buffer supplied with this enzyme.

PRODUCTS RECOMMENDED FOR YOU

Product	Catalog#	Quantity
Vortex Genie® 2 Vortex	13111-V 13111-V-220	1 unit (120V) 1 unit (220V)
Vortex Adapter for Vortex Genie® 2	13000-V1-24	Holds 24 (2 ml) Tubes
RNase-Free Gloves	1555-XS 1555-S 1555-M 1555-L	Bag of 100 Bag of 100 Bag of 100 Bag of 100
PowerBiofilm® RNA Isolation Kit	25000-50	50 preps
PowerMicrobiome® RNA Isolation Kit	26000-50	50 preps
UltraClean® Microbial RNA Isolation Kit	15800-50	50 preps
PowerPlant® RNA Isolation Kit	13500-50	50 preps
RNA PowerSoil® Total RNA Isolation Kit	12866-25	25 preps

TECHNICAL SUPPORT

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Committed to resolving your technical questions promptly, our technical support team is trained to work with you to rapidly and effectively trouble shoots any issues. We commit to providing you with relevant online support resources that help you complete your research projects.

Frequently Asked Questions:
www.mobio.com/faq

SDS:
www.mobio.com/sds

Protocols:
www.mobio.com/protocols

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