



GENETIX BRAND

HANDBOOK



## RNASure® Fusion RNA Mini Kit

RNASure® Fusion RNA Mini Kit      NP-101503      100Preps



**Genetix Biotech Asia Pvt. Ltd.**

71/1, First Floor, Shivaji Marg, Najafgarh Road, New Delhi - 110015

Phone : +91-11-45027000 ■ Fax : +91-11-25419631

E-mail : [info@genetixbiotech.com](mailto:info@genetixbiotech.com) ■ [www.genetixbiotech.com](http://www.genetixbiotech.com)



[www.genetixbiotech.com](http://www.genetixbiotech.com)

# RNASure® Fusion RNA Mini Kit (100)

## Table of Contents

COMPONENTS	Page No
❖ Index	2
❖ Kit contents	3
❖ Material not provided	3
❖ Quality control	4
❖ Storage conditions	4
❖ User precautions	4
❖ Product specification	4
❖ Preventing RNase contamination	5
❖ Product description	5
❖ Protocol	6
❖ Supplementary Protocol	8
❖ Appendix 1	11
❖ Appendix 2	12
❖ Trouble shooting	13

## COMPONENTS

### Kit contents

## RNASure® Fusion RNA Mini Kit

Cat #	NP-101503
No. of Preps	(100 preps.)
GeneZol™ CT RNA Extraction Reagent	100 ml
Buffer RB1	70 ml
Buffer SW1	55 ml
Buffer RNW	55 ml
RNase-free water	20 ml
Spin Column	100
1.5 ml collection tube	100
Handbook	1

## Materials Not Provided

### Reagent

- \* Chloroform or 1-bromo-3-chloropropane(BCP)
- \* Tissue storage buffer to protect RNA from RNase

### Disposable material

- \* RNase-free pipet tips
- \* Disposable gloves

### Equipment

- \* Equipment for homogenizing solid tissue
- \* Microcentrifuge for centrifugation at 4°C and at room temperature
- \* Suitable protector (ex; lab coat, disposable gloves, goggles, etc)

## Quality Control

RNASure® Fusion RNA Mini Kit is manufactured in strictly clean condition, and its degree of cleanness is monitored periodically. For consistency of product, the quality certification process is carried out from lot to lot thoroughly and only the qualified is approved to be delivered.

## Storage Conditions

RNASure® Fusion RNA Mini Kit except GeneZol™ CT RNA Extraction Reagent solution should be stored at room temperature. All components are stable for 1 year. GeneZol™ CT RNA Extraction Reagent solution should be stored at 2 to 8°C for optimal performance.

## User Precautions

GeneZol™ CT RNA Extraction Reagent contains phenol which is poisonous and guanidine salt which is an irritant. When working with RNASure® Fusion RNA Mini Kit use gloves and eye protector to avoid contact with skin or clothing and inhalation of vapor. In case of contact, wash immediately with plenty of water and seek medical advice.

## Product Disclaimer

RNASure® Fusion RNA Mini Kit is for research use only, not for use in diagnostic procedure.

## Product Specifications

Specification	RNASure® Fusion RNA Mini Kit
Type	Spin
Maximum amount of starting samples	~ 100 mg or ~ 1 x 10 <sup>7</sup> cells
Maximum loading volume	~ 700 ul
Minimum elution volume	~ 30 ul
Maximum binding capacity	~ 500 ug

## Preventing RNase Contamination

RNase can be introduced accidentally into a RNA preparation. Wear disposable gloves always, because skin often contains bacteria that can be a source of RNase. Use sterile, disposable plasticwares and automatic pipettes reserved for RNA work to prevent cross-contamination with RNase on shared equipment.

## Product Description

RNASure® Fusion RNA Mini Kit is a complete kit with ready-to-use reagent for the isolation of total RNA from tissue samples or cultured cells.

This kit utilizes the lysis method of GeneZol™ CT RNA Extraction Reagent which has a powerful ability of lysis and the purification method based on glassfiber membrane technology. Fast and convenient procedure of RNASure® Fusion RNA Mini Kit takes only 30 minutes for complete preparations of pure RNA.

Samples are homogenized in GeneZol™ CT RNA Extraction Reagent, a monophasic solution containing phenol and guanidine salt, which rapidly lyse cells and inactivates nucleases. Addition of chloroform brings about a separation of the homogenate into aqueous and organic phases. RNA locates in the aqueous phase while DNA and protein remain in the interphase and organic phase. The aqueous phase including RNA is mixed with buffer RB1, RNA binding buffer, and then bind to a spin column. After washing with buffer SW1 and RNW, RNA is eluted by RNase-free water.

RNASure® Fusion RNA Mini Kit is suitable for RNA preparation from up to 100 mg tissues or 1 x 10<sup>7</sup> cultured cells. The maximum yield reaches 500 ug per 100 mg tissues. The purified RNA is suitable for the isolation of Poly A RNA, Northern blotting, Dot blotting, in vitro Translation, cloning, RT-PCR, RNase protection assays, and other analytical procedures.

## RNASure® Fusion RNA Mini Kit

PROTOCOL for Total RNA Isolation

**1. Homogenize ~ 100 mg tissue samples in 1 ml GeneZol™ CT RNA Extraction Reagent.**

**Homogenize ~ 1 x 10<sup>7</sup> cells in 1 ml GeneZol™ CT RNA Extraction Reagent.**

### **Tissue samples**

Homogenize ~ 100 mg of tissue samples in 1 ml GeneZol™ CT RNA Extraction Reagent using homogenizer. The sample volume should not exceed 10% (w/v) of the volume of GeneZol™ CT RNA Extraction Reagent used for homogenization.

### **Handling fresh tissue**

Immediately after dissection, inactivate RNases by any one of the following treatments.

\* Homogenize in GeneZol™ CT RNA Extraction Reagent immediately.

\* Freeze rapidly in liquid nitrogen.

\* Submerge in a tissue storage buffer to protect RNA from RNases.

### **Cell samples**

Cells grown in Monolayer

Pour off media, add 1 ml of GeneZol™ CT RNA Extraction Reagent per 10 cm<sup>2</sup> of culture dish area. Pass the cell lysate several times through a pipette. An insufficient amount of GeneZol™ CT RNA Extraction Reagent may result in contamination of the isolated RNA with DNA.

### Cells grown in suspension

Pellet cells by centrifugation, then lyse in 1 ml of GeneZol™ CT RNA Extraction Reagent per ~ 1 x 10<sup>7</sup> animal cells, or 10<sup>7</sup> bacterial cells, by repetitive pipetting or vortexing.

\* Do not wash cells before lysing with GeneZol™ CT RNA Extraction Reagent as this may contribute to mRNA degradation.

**2. Incubate the homogenate for 5 minutes at room temperature.**

This step allows nucleoprotein complexes to completely dissociate.

Homogenized samples can be stored at -70°C for at least one month.

**3. (optional :) Centrifuge at 12,000 x g for 10 minutes at 4°C and transfer the supernatant to a fresh tube.**

This optional step is only required for homogenate with high contents of proteins, fats, polysaccharides or extracellular materials such as muscles, fat, tissue, and tuberous parts of plants.

The resulting pellet contains extracellular membranes, polysaccharides, and high molecular weight DNA, while the supernatant contains RNA.

Fat tissue samples will form a layer on top of the aqueous phase, therefore, remove and discard this layer.

**4. Add 0.2 ml of chloroform per 1 ml of GeneZol™ CT RNA Extraction Reagent. Shake vigorously for 15 seconds and store for 2 minutes at room temperature.**

Alternatively, 0.1 ml of BCP (1-bromo-3-chloropropane) can be used in place of chloroform

**5. Centrifuge at 12,000 x g for 15 minutes at 4°C and transfer the aqueous phase to a fresh tube.**

The mixture will be separated into three phases; a lower layer, an interphase, and a colorless upper aqueous layer. The upper aqueous layer is about 50% of the volume of GeneZol™ CT RNA Extraction Reagent used for homogenization.

Centrifugation at temperatures >8°C may cause some DNA to partition in the aqueous phase.

**6. Add 1 volume of buffer RB1 to the sample and mix thoroughly by inverting. Do not centrifuge.**

**7. Transfer upto 700 ul of the mixture to the spin column.**

**8. Centrifuge at ≥ 10,000 x g for 30 seconds at room temperature.**

Discard the pass-through and reinsert the mini spin column back into the same tube.

**9. Repeat step 7 ~ 8 using the remainder of the sample.**

Discard the pass-through and reinsert the mini spin column back into the same tube.

**10. Add 500 ul of buffer SW1 to the spin column.**

**11. Centrifuge at ≥ 10,000 x g for 30 seconds at room temperature.**

**12. Add 500 ul of buffer RNW to the mini spin column.**

**13. Centrifuge at ≥ 10,000 x g for 30 seconds at room temperature.**

Discard the pass-through and reinsert the spin column back into the same tube.

**14. Centrifuge at ≥ 10,000 x g for an additional 1 minute at room temperature to remove residual wash buffer. Transfer the spin column to a new 1.5 ml tube (provided).**

Residual ethanol may interfere with downstream reactions. Care must be taken at this step for eliminating the carryover of buffer RNW.

**15. Add 50 ~ 100 ul of RNase-free water to the center of the membrane in the mini spin column. Let it stand for 1 minute.**

**16. Centrifuge at ≥ 10,000 x g for 1 minute at room temperature.**

Purified RNA can be stored at 4°C for immediate analysis and can be stored at -70°C for long term storage.

The purified RNA is free of DNA and proteins, and A260/A280 will be between 1.8 and 2.1.

## Supplementary Protocol

### Total RNA purification method using GeneZol™ CT RNA Extraction Reagent solution only (Manual method)

RNASure® Fusion RNA Mini Kit is simplified method of GeneZol™ CT RNA Extraction Reagent, manual method, using mini spin column. Therefore, GeneZol™ CT RNA Extraction Reagent, lysis buffer of RNASure® Fusion RNA Mini Kit, can be used for total RNA purification, independently. This method gives an improved yield up to 30% but the purity will be reduced slightly. More over, the whole experimental time will be extended over 1 hour because of the prolonged precipitation and washing steps.

As your experimental purpose, you can use the appropriate method.

The procedure of total RNA purification using GeneZol™ CT RNA Extraction Reagent is shown below.

#### Materials Not Provided

For RNA isolation

- \* Nuclease-free Water
- \* Equipment for homogenizing solid tissue
- \* RNase-free centrifuge tubes
- \* Chloroform or 1-bromo-3-chloropropane(BCP)
- \* 100% isopropanol, ACS grade or better
- \* 100% ethanol, ACS grade or better
- \* High salt precipitation solution for plant (0.8 M sodium citrate and 1.2 M NaCl)

## Protocol for RNA isolation

### 1. Homogenize 50 ~ 100 mg tissue samples in 1 ml GeneZol™ CT RNA Extraction Reagent.

### Homogenize 5 ~ 10 x 10<sup>6</sup> cells in 1 ml GeneZol™ CT RNA Extraction Reagent.

#### Tissue samples

Homogenize tissue samples in 1 ml GeneZol™ CT RNA Extraction Reagent per 50 ~ 100 mg of tissue using homogenizer.

The sample volume should not exceed 10% of the volume of GeneZol™ CT RNA Extraction Reagent used for homogenization.

#### Handling fresh tissue

Immediately after dissection, inactivate RNases by any one of the following treatments.

- \* Homogenize in GeneZol™ CT RNA Extraction Reagent immediately.
- \* Freeze rapidly in liquid nitrogen.
- \* Submerge in a tissue storage buffer to protect RNA from RNase.

#### Cell samples

##### Cells grown in Monolayer

Pour off media, add 1 ml of GeneZol™ CT RNA Extraction Reagent per 10 cm<sup>2</sup> of culture dish area. Pass the cell lysate several times through a pipette. An insufficient amount of GeneZol™ CT RNA Extraction Reagent may result in contamination of the isolated RNA with DNA.

##### Cells grown in suspension

Pellet cells by centrifugation, then lyse in 1 ml of GeneZol™ CT RNA Extraction Reagent per 5 ~ 10 x 10<sup>6</sup> animal, plant, or yeast cells, or per 10<sup>7</sup> bacterial cells, by repetitive pipetting or vortexing.

\* Do not wash cells before lysing with GeneZol™ CT RNA Extraction Reagent as this may contribute to mRNA degradation.

### 2. Incubate the homogenate for 5 minutes at room temperature.

This step allows nucleoprotein complexes to completely dissociate.

Homogenized samples can be stored at -70°C for at least one month.

### 3. (Optional :) Centrifuge at 12,000 x g for 10 minutes at 4°C and transfer the supernatant to a fresh tube.

This optional step is only required for homogenate with high contents of proteins, fats, polysaccharides or extracellular materials such as muscles, fat, tissue, and tuberous parts of plants. The resulting pellet contains extracellular membranes, polysaccharides, and high molecular weight DNA, while the supernatant contains RNA.

Fat tissue samples will form a layer on top of the aqueous phase, therefore, remove and discard this layer.

### 4. Add 0.2 ml of chloroform per 1 ml of GeneZol™ CT RNA Extraction Reagent . Shake vigorously for 15 seconds, store for 2 minutes at room temperature.

Alternatively, 0.1 ml of BCP (1-bromo-3-chloropropane) can be used in place of chloroform.

### 5. Centrifuge at 12,000 x g for 15 minutes at 4°C, then transfer the aqueous phase to a fresh tube.

The mixture separates into a lower layer, an interphase, and a colorless upper aqueous layer. The upper aqueous layer is about 50% of the volume of GeneZol™ CT RNA Extraction Reagent used for homogenization. Centrifugation at above 8°C may cause some DNA to partition in the aqueous phase.

### 6. Add 0.5 ml of isopropyl alcohol per 1 ml of GeneZol™ CT RNA Extraction

**Reagent used for the initial homogenization and gently mix the solution by inverting, 5 ~ 10 times.**

**Proteoglycan and polysaccharide contamination**

To RNA precipitate from tissue with high content of proteoglycans and/or polysaccharides (after step 5), these contaminating compounds from the isolated RNA are removed by the modified method.

Add to the aqueous phase 0.4 ml of isopropyl alcohol and 0.1 ml of a high salt precipitation solution (0.8 M sodium citrate and 1.2 M NaCl) per 1 ml GeneZol™ CT RNA Extraction Reagent. After mixing this solution, proceed with the step 7.

This modified precipitation effectively precipitates RNA and maintains proteoglycans and polysaccharides in a soluble form. This procedure should only be used if the sample is known to have a high content of proteoglycans and polysaccharides. To isolate pure RNA from plant material containing a very high level of polysaccharides, the modified precipitation should be combined with an additional centrifugation of the initial homogenate.

**7. Incubate samples for 10 minutes at room temperature.**

**8. Centrifuge at 12,000 x g for 10 minutes at 4°C, and discard the supernatant.**

Carefully remove the supernatant without disturbing the pellet.

Precipitated RNA forms a gel-like or white pellet on the side and bottom of the tube.

To increase yield, store sample for 30 minutes ~ overnight at -20°C.

**9. Add 1ml of 75% ethanol per 1ml GeneZol™ CT RNA Extraction Reagent to wash the RNA pellet.**

The RNA precipitate can be stored in 75% ethanol at 4°C for one week, or at -20°C for at least one year.

**10. Centrifuge at 7,500 x g for 5 minutes. Carefully discard the supernatant, ethanol, and air-dry the RNA pellet for 5 minutes.**

The RNA pellet is very loose at this point and care must be taken to avoid missing the pellet. Do not completely dry the RNA pellet as this will greatly decrease its solubility.

Ethanol should be completely removed to perform perfect downstream application.

**11. Dissolve RNA in DEPC-treated water or in 0.5% SDS solution by incubating for 10 ~15 minutes at 56°C.**

The resuspension volume is applied to samples. For example, enough resuspension volume is 50 ~ 100 ul per 1 ml reaction for E. coli, cultured cell, or plant, or 300 ~ 500 ul per 1 ml reaction for tissue. For immediate analysis, store at 4°C and for long term storage, store at -70°C.

For best results in RT-PCR, dissolve the RNA in DEPC-treated water not included EDTA.

The final precipitation of total RNA will be free of DNA and proteins, and will have a 260/280 O.D. ratio of 1.8 to 2.2.

## APPENDIX 1

Confirmation of RNA yield and purity by UV absorbance

**Concentration of RNA**

The concentration of RNA can be determined by using the absorbance of spectrophotometer at 260nm. For the convenient measurement, we recommend using the Master Nano which can also reduce your RNA sample and time. If not, you need to dilute the RNA samples to measure the concentration through traditional spectrophotometer. The value of A260 should be between 0.15 and 1.00. Be sure to calibrate the spectrophotometer with the same solution used for dilution. An absorbance of 1 at 260nm is about 40 ug RNA / ml at a neutral pH. Therefore, the concentration of RNA was calculated by the formula shown below.

A260 X dilution factor X 40 = RNA µg/ml

**Purity of RNA**

To confirm the RNA purity, you should read the ratio of A260/A280. Pure RNA is in the range of 1.8~2.2.

## APPENDIX 2.

### Formaldehyde agarose gel electrophoresis (Denaturing gel method)

A denaturing agarose gel is routinely used for the assessment of the quality of an RNA preparation. After preparation, RNA forms secondary structure via intramolecular base pairing. Therefore, it is very difficult to get the exact result of electrophoresis because of migrating inaccuracy.

However, the denaturing gel denatures the secondary structure of RNA and makes an accurate migration.

To confirm the RNA band, the gel should be transferred to a UV transilluminator after electrophoresis. Mainly, two RNA bands are shown. In case of animal sample, the 28S and 18S rRNA bands are confirmed on the gel. If they are intact, the RNA bands should be sharp and the intensity of upper band should be about twice that of the lower band.

#### Prepare the denaturing gel

1. Put 1g agarose in 72 ml water and heat to dissolve thoroughly.
2. Cool to 60°C.
3. Add 10 ml of 10 X MOPS buffer, 18 ml of 37% formaldehyde, and 1ul of 10 mg/ml ethidium bromide (EtBr).
4. Mix well then pour the gel into the gel tray and cool to solidify it.
5. Transfer the solidified gel from tray to tank, and add enough 1 X MOPS running buffer to cover the gel.

#### Prepare the RNA sample

1. Make the mixture.
 

	RNA (up to 20 ug)
	2 ul 10 X MOPS electrophoresis buffer
	4 ul formaldehyde
	10 ul formamide
2. Incubate the mixture for 15 minutes at 65°C.
3. Chill the sample for 5 minutes in ice.
4. Add 2 ul of 10 X formaldehyde gel-loading dye to the mixture.
5. Load the mixture in a denaturing gel which is covered with a sufficient 1 X MOPS electrophoresis buffer.
6. Run the gel and confirm the RNA band on transilluminator. Occasionally, gel de-staining may be needed to increase the visibility of the bands of RNA in dH<sub>2</sub>O for several hours.

#### Composition of buffers

- 10 X MOPS buffer
- 0.2 M MOPS
- 20 mM sodium acetate
- 10 mM EDTA
- pH to 7.0 with NaOH

#### - 10 X formaldehyde gel-loading dye

- 50% glycerol
- 10 mM EDTA
- 0.25% (w/v) bromophenol blue
- 0.25% (w/v) xylene cyanol FF

#### \* Caution

When working with these chemicals, always use gloves and eye protector to avoid contact with skin and cloth. Especially, formaldehyde and ethidium bromide (EtBr) should be handled in a fume hood.

## Troubleshooting Guide

Facts	Possible Causes	Suggestions
Low or No yield	Poor quality of starting material	Process the sample immediately after harvest from animal. Thaw the frozen sample directly in GeneZol™ CT RNA Extraction Reagent
	Sample not homogenized completely	Make sure no particulate matter remains. Be sure to incubate for 5 minutes at room temperature after homogenization.
	Some aqueous phase Left	Perform second extraction with the remaining aqueous phase.
Degradation of RNA	Incorrect elution conditions	Add RNase-free water to the center of the spin column membrane and perform incubation for 1 minute before centrifugation.
	Sample manipulated too much before the addition of GeneZol™ CT RNA Extraction Reagent	Process the sample immediately after harvest from animal. For cultured cell, minimize washing steps. Add GeneZol™ CT RNA Extraction Reagent directly to plates. Do not trypsinize cells.
	Improper storage of RNA	Store isolated RNA at -70°C, Do not store at -20°C.
	Reagent or disposable is not RNasefree	Make sure to use RNase free products only.

**Low A260/A280 (<1.6)**

**Aqueous phase was contaminated with the phenol phase**

Avoid carryover when transferring the aqueous phase to a fresh tube.

**RNA does not perform well in downstream application**

**Residual ethanol remains in eluate**

Then transfer homogenate to a tube.

To remove any residual ethanol included in buffer RNW from mini spin column membrane, Centrifuge again (step 14).

<b>Facts</b>	<b>Possible Causes</b>	<b>Suggestions</b>
<b>Low A260/A280 (&lt;1.6)</b>	<b>Sample not completely Homogenized with GeneZol™ CT RNA Extraction Reagent</b>	Use 1 ml GeneZol™ CT RNA Extraction Reagent for up to 100 mg tissue or upto 10 <sup>7</sup> cells.  Be sure to incubate sample for 5 minutes at room temperature after homogenization.
<b>Contamination of DNA</b>	<b>The interphase was co-transferred by mistake</b>	Be sure not to transfer any of the interphase (containing DNA) to the aqueous phase.
	<b>Insufficient GeneZol™ CT RNA Extraction Reagent used</b>	Use 1 ml GeneZol™ CT RNA Extraction Reagent for 100 mg tissue or 10 <sup>7</sup> cells.
	<b>Temperature was too high during centrifugation</b>	The phase separation should be performed at 4°C to allow optimal phase separation and removal of genomic DNA from the aqueous Phase
<b>Cells not detached completely from flask after addition of GeneZol™ CT RNA Extraction Reagent</b>	<b>This can be seen with Some strongly adherent cells</b>	After addition of GeneZol™ CT RNA Extraction Reagent, let cells sit 2 to 3 minutes. Scrape cells with a scraper. Incubate for several minutes. Collect and repeatedly pipette cells over flask surface.

## ORDERING INFORMATION

Description	Pack Size	Cat. No.
DNASure® Tissue Mini Kit	50 preps	NP-61305
DNASure® Plant Mini Kit	50 preps	NP-79105
DNASure® Plant Mini Kit	250 preps	NP-79107
DNASure® Plant Midi Kit	20 preps	NP-78153
DNASure® Plant Maxi Kit	10 preps	NP-78164
DNASure® Blood Mini Kit	50 preps	NP-61105
DNASure® Blood Mini Kit	250 preps	NP-61107
DNASure® Blood Midi Kit	20 preps	NP-61184
DNASure® Blood Maxi Kit	10 preps	NP-61193
DNASure® Blood FastPure Kit	50 preps	NP-62205
DNASure® Blood FastPure Kit	250 preps	NP-62207
SureSpin® Plasmid Mini Kit	50 preps	NP-37105
SureSpin® Plasmid Mini Kit	250 preps	NP-37107
SureSpin® Plasmid FastPrep Kit	50 preps	NP-47105
SureSpin® Plasmid FastPrep Kit	250 preps	NP-47107
SureSpin® Buffer Set*	1	37107-BS
SurePrep® Plasmid Mini Kit	20 preps	NP-15123
SurePrep® Plasmid Mini Kit	100 preps	NP-15125
SurePrep® Plasmid Midi Kit	20 preps	NP-15143
SurePrep® Plasmid Midi Kit	100 preps	NP-15145
SurePrep® Plasmid Maxi Kit	10 preps	NP-15161
SurePrep® Plasmid Maxi Kit	25 preps	NP-15162
SurePrep® Plasmid Mega Kit	5 preps	NP-15183
SurePrep® Plasmid Giga Kit	5 preps	NP-15191

### \*SureSpin® Buffer Set

For the isolation of low-copy plasmids, buffers PA1, PA2, PA3, RNase A, sufficient for 300 preps

## ORDERING INFORMATION

Description	Pack Size	Cat. No.
SurePrep® Buffer Set**	1	15143-BS
SurePrep® Plasmid Endofree Maxi Kit	10 preps	NP-15363
SurePrep® Plasmid Endofree Mega Kit	5 preps	NP-15365
SurePrep® Plasmid Endofree Giga Kit	5 preps	NP-15367
SureSpin® 96 PCR Kit	4x96	NP-38151
SureTrap® Gel Extraction Kit	50 preps	NP-38705
SureTrap® Gel Extraction Kit	250 preps	NP-38707
SureTrap® PCR Cleanup Kit	50 preps	NP-38105
SureTrap® PCR Cleanup Kit	250 preps	NP-38107
SureExtract® Spin PCR/Gel Extraction Kit	50 preps	NP-36105
SureExtract® Spin PCR/Gel Extraction Kit	250 preps	NP-36107
SureSEQ® Cleanup Kit	50 preps	NP-73205
RNASure® Mini Kit	50 preps	NP-84105
RNASure® Mini Kit	250 preps	NP-84107
RNASure® Plant Kit	50 preps	NP-84905
RNASure® Plant Kit	250 preps	NP-84907
miRNASure® Mini Kit	50 preps	NP-71002
SureTrap® mRNA Mini Kit	12 preps	NP-80033
SureTrap® mRNA Midi Kit	12 preps	NP-80043
RNASure® Virus Kit	50 preps	NP-67705
RNASure® Virus Kit	250 preps	NP-67707

### \*\*SureSpin® Buffer Set

For isolation of low-copy plasmids, cosmids, BACs, PACs, and P1 constructs, only applicable with SurePrep® Plasmid kits, sufficient for 10 SurePrep Maxi Columns (Maxi preps), 20 SurePrep® Midi Columns (Midi preps), set incl. RNase A

## ORDERING INFORMATION

Description	Pack Size	Cat. No.
Nucleo-pore® Stool DNA Mini Kit	50	NP-7011D
Nucleo-pore® gRNA Blood Kit	50	NP-0201R
Nucleo-pore® gDNA Urine Kit	20	NP-6030D
Nucleo-pore® Yeast Transformation Kit	120	NP-1002T
Nucleo-pore® DNA Methylation Kit	50	NP-6006D
Nucleo-pore® gDNA Clean-up Kit	200	NP-4304D
Nucleo-pore® Bisulphite DNA Clean-up Kit	50	NP-5205D
Nucleo-pore® gDNA Fungal/Bacterial Mini Kit	50	NP-7006D

## Product Warranty

RNASure® Fusion RNA Mini Kit components are intended for research purposes only. They are suitable for in vitro uses only. The purchaser must determine the suitability of the product for its particular use. Should any product fail to perform satisfactorily due to any reason other than misuse, Genetix will replace it free of charge or refund the purchase price. Genetix reserve the right to change, alter, or modify any product to enhance its performance and design. It is the responsibility of the user to verify the use of the RNASure® Fusion RNA Mini Kit for a specific application range as the performance characteristic of this kit has not been verified to a specific organism. No claim or representation is intended for its use to identify any specific organism or for clinical or therapeutic use.

Genetix does not warrant against damages or defects arising in shipping and handling (transport insurance for customers excluded), or out of accident or improper or abnormal use of this product.

In accordance with Genetix ISO-certified Quality Management System, each lot of RNASure® Fusion RNA Mini Kit is tested against predetermined specifications to ensure consistent product quality.

In no event shall Genetix be liable for claims for any other damages, whether direct, indirect, incidental, compensatory, foreseeable, consequential, or special (including but not limited to loss of use, revenue or profit), whether based upon warranty, contract, tort (including negligence) or strict liability arising in connection with the sale or the failure of Genetix products to perform in accordance with the stated specifications.

Product claims are subject to change. Therefore please contact our Technical Support Department for updated information on Genetix products.

### Please contact:

Genetix Biotech Asia (P) Ltd.

71/1, Najafgarh Road, Shivaji Marg,

New Delhi. 110015.

INDIA.

E-mail: [info@genetixbiotech.com](mailto:info@genetixbiotech.com)

[techsupport@genetixbiotech.com](mailto:techsupport@genetixbiotech.com)

Tel: +91-11-45027000

Fax: +91-11-25419631

### Trademarks:

DNASure is a registered trademark of Genetix Biotech Asia (P) Ltd.