GeneAll® Product Information

GeneAll® Hybrid-Q™ *for rapid preparation of plasmid DNA*

Products	Format	Size	Cat. No
Plasmid Rapidprep	mini	50	100-150
Plasmid Rapidprep	mini	200	100-102

GeneAll® Exprep™ *for preparation of plasmid DNA*

Plasmid SV	mini	50	101-150
Plasmid SV	mini	200	101-102
Plasmid SV	mini	1,000	101-111
Plasmid SV	Midi	26	101-226
Plasmid SV	Midi	50	101-250
Plasmid SV	Midi	100	101-201

GeneAll® Exfection™ *for preparation of highly pure plasmid DNA*

Plasmid LE	mini	50	111-150
Plasmid LE	mini	200	111-102
Plasmid LE	Midi	26	111-226
Plasmid LE	Midi	100	111-201
Plasmid EF	Midi	20	121-220
Plasmid EF	Midi	100	121-201

GeneAll® Expin™ *for purification of fragment DNA*

Gel SV	mini	50	102-150
Gel SV	mini	200	102-102
PCR SV	mini	50	103-150
PCR SV	mini	200	103-102
CleanUp SV	mini	50	113-150
CleanUp SV	mini	200	113-102
Combo GP	mini	50	112-150
Combo GP	mini	200	112-102

GeneAll® Exgene™ *for isolation of total DNA*

Tissue SV *(plus!)**	mini	100	104(9)-101
Tissue SV *(plus!)**	mini	250	104(9)-152
Tissue SV *(plus!)***	Midi	26	104(9)-226
Tissue SV *(plus!)***	Midi	100	104(9)-201
Tissue SV *(plus!)***	MAXI	10	104(9)-310
Tissue SV *(plus!)***	MAXI	26	104(9)-326
Blood SV	mini	100	105-101
Blood SV	mini	250	105-152
Blood SV	Midi	26	105-226
Blood SV	Midi	100	105-201
Blood SV	MAXI	10	105-310
Blood SV	MAXI	26	105-326
Cell SV	mini	100	106-101
Cell SV	mini	250	106-152
Cell SV	MAXI	10	106-310
Cell SV	MAXI	26	106-326
Clinic SV	mini	100	108-101
Clinic SV	mini	250	108-152
Clinic SV	Midi	26	108-226
Clinic SV	Midi	100	108-201
Clinic SV	MAXI	10	108-310
Clinic SV	MAXI	26	108-326
Genomic DNA micro	micro	50	118-050
Plant SV	mini	100	117-101
Plant SV	mini	250	117-152
Plant SV	Midi	26	117-226
Plant SV	Midi	100	117-201
Plant SV	MAXI	10	117-310
Plant SV	MAXI	26	117-326
GMO SV	mini	50	107-150
GMO SV	mini	200	107-102

GeneAll® *GenEx*™ *for isolation of total DNA*

GenEx™ B	Sx†	100	220-101
GenEx™ B	Sx†	500	220-105
GenEx™ B	Lx††	100	220-301

GeneAll® *GenEx*™ *for isolation of total DNA*

Products	Format	Size	Cat. No
GenEx™ C	Sx†	100	221-101
GenEx™ C	Sx†	500	221-105
GenEx™ C	Lx††	100	221-301
GenEx™ T	Sx†	100	222-101
GenEx™ T	Sx†	500	222-105
GenEx™ T	Lx††	100	222-301

GeneAll® DirEx™ *Single tube DNA extraction buffer for PCR*

DirEx™	Solution	50	250-050

GeneAll® RNA Series *for preparation of RNA*

Hybrid-R™	spin	100	305-101
Hybrid-R™ Blood RNA	spin	50	315-150
Hybrid-R™ miRNA	spin	50	325-150
RiboEx™	solution	100	301-001
RiboEx™	solution	200	301-002
RiboEx™ LS	solution	100	302-001
RiboEx™ LS	solution	200	302-002
Riboclear™	spin	50	303-150
Riboclear™ *plus!*	spin	50	313-150
Ribospin™	spin	50	304-150
Ribospin™ vRD	spin	50	302-150
Ribospin™ vRD *plus!*	spin	50	312-150
Ribospin™ Plant	spin	50	307-150
Allspin™	spin	50	306-150

GeneAll® AmpONE™ *for PCR amplification*

Taq DNA polymerase	(2.5 U/㎕)	250 U	501-025
Taq DNA polymerase	(2.5 U/㎕)	500 U	501-050
Taq DNA polymerase	(2.5 U/㎕)	1000 U	501-100
α-Taq DNA polymerase	(2.5 U/㎕)	250 U	502-025
α-Taq DNA polymerase	(2.5 U/㎕)	500 U	502-050
α-Taq DNA polymerase	(2.5 U/㎕)	1000 U	502-100
Pfu DNA polymerase	(2.5 U/㎕)	250 U	503-025
Pfu DNA polymerase	(2.5 U/㎕)	500 U	503-050
Pfu DNA polymerase	(2.5 U/㎕)	1000 U	503-100
HS-Taq DNA polymerase	(2.5 U/㎕)	250 U	531-025
HS-Taq DNA polymerase	(2.5 U/㎕)	500 U	531-050
HS-Taq DNA polymerase	(2.5 U/㎕)	1000 U	531-100
Clean Taq DNA polymerase	(2.5 U/㎕)	250 U	551-025
Clean Taq DNA polymerase	(2.5 U/㎕)	500 U	551-050
Clean Taq DNA polymerase	(2.5 U/㎕)	1000 U	551-100
Clean α-Taq DNA polymerase	(2.5 U/㎕)	250 U	552-025
Clean α-Taq DNA polymerase	(2.5 U/㎕)	500 U	552-050
Clean α-Taq DNA polymerase	(2.5 U/㎕)	1000 U	552-100
Taq Premix	96 tubes	20 ㎕	521-200
Taq Premix	96 tubes	50 ㎕	521-500
α-Taq Premix	96 tubes	20 ㎕	522-200
α-Taq Premix	96 tubes	50 ㎕	522-500
HS-Taq Premix	96 tubes	20 ㎕	525-200
HS-Taq Premix	96 tubes	20 ㎕	525-500
Taq Master mix	0.5 ml x 2 tubes	1 ml	541-010
Taq Master mix	0.5 ml x 10 tubes	5 ml	541-050
α-Taq Master mix	0.5 ml x 2 tubes	1 ml	542-010
α-Taq Master mix	0.5 ml x 10 tubes	5 ml	542-050
HS-Taq Master mix	0.5 ml x 2 tubes	1 ml	545-010
HS-Taq Master mix	0.5 ml x 10 tubes	5 ml	545-050
Taq Premix (w/o dye)	96 tubes	50 ㎕	524-200
dNTP mix	2.5 mM each	500 ㎕	509-020
dNTP set (set of dATP, sCTP,dGTP and dTTP)	100 mM	1 ml x 4 tube	509-040

** GeneAll® Tissue SV mini, Midi, and MAXI plus! kit provide the additional methods for the purification from animal whole blood.*
*** GeneAll® SV Midi / MAXI kits require the centrifuge which has a swinging-bucket rotor and ability of 4,000 ~ 5,000 xg.*
† On the basis of DNA purification from 300 ㎕ whole blood. †† On the basis of DNA purification from 10 ml whole blood.

GENEALL BIOTECHNOLOGY CO., LTD www.geneall.com T : 82-2-407-0096 F : 82-2-407-0779

GeneAll®

For research use only

Cat. No. 313-150

Size: 50 prep

Riboclear™ *plus!*

Kit Contents

Components	Quantity	Storage
DNase I	55 ul	-20 ℃
Buffer MS	30 ml	Room temperature
Buffer RNW	60 ml	
RNase-free water	15 ml	
DNase I buffer (10 X)	1 ml	
Micro column type S (with collection tube)	50	
1.5 ml collection tube	50	

Product Specifications

Riboclear™ *plus!* Specifications	
Type	Spin
Maximum amount of starting samples	~ 100 ul
RNA recovery rate	~ 95%
Preparation time	~ 17 minutes
Maximum loading volume	~ 800 ul
Minimum elution volume	20 ul
Binding capacity	~ 100 ug

Quality Control

Riboclear™ *plus!* 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

Riboclear™ *plus!* should be stored at room temperature. But prolonged storage at high temperature over 30°C can reduce the performance of the kit. All components are stable for 1 year. Keep out of direct sunlight.

Precautions

The buffers included in Riboclear™ *plus!* contain irritant which is harmful when in contact with skin or eyes, or when inhaled or swallowed. Care should be taken during handling. Always wear gloves and eye protector, and follow standard safety precautions. In case of contact, wash immediately with plenty of water and seek medical advice

Buffer MS contains chaotropes. It can form highly reactive compounds when combined with bleach. Do NOT add bleach or acidic solutions directly to the sample-preparation waste.

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

Riboclear™ *plus!* provides a convenient method for DNase I treatment and clean-up of total RNA. Riboclear™ *plus!* procedures employed the glassfiber membrane technology for the clean-up of total RNA, instead of conventional alcohol precipitation.

In this Riboclear™ *plus!* kit, especially, contaminated DNA in extracted total RNA can be removed by DNase I treatment prior to starting the procedure of RNA clean-up.

After the step for removal of contaminated DNA, RNA-containing samples mixed with buffer MS are applied to a micro spin column, followed by centrifugation. RNA binds to silica membrane while most of impurities pass through. The membrane is washed by buffer RNW for removal of some molecules bound nonspecifically. At last, pure RNA is eluted by RNase-free water. Riboclear™ *plus!* procedure should be performed at room temperature. The eluate should be treated with care because RNA is very sensitive to contaminants, such as RNases, often found on general lab ware and dust. To ensure RNA-stability, it is recommended to store at 4°C for immediate analysis or to freeze at -70°C for long-term storage.

Protocol of Riboclear™ *plus!*

<The procedure for removal of contaminated DNA>

1. **Prepare the mixture as below in a 1.5 ml tube.**
   50 ul RNA eluate
   5 ul DNase Ⅰ buffer (10 X)
   1 ul DNase Ⅰ

   If the volume of your sample is more than 50 ul, adjust DNase Ⅰ buffer to the volume of RNA eluate proportionally.
   Also, DNase Ⅰ is sensitive to physical damage.
   Therefore, Do NOT vortex vigorously.

2. **Incubate the mixture at room temperature for 10 minutes.**

3. **Continue with "The procedure of RNA clean-up and concentration"**

<The procedure of RNA clean-up and concentration>

1. **Add 5 volumes of buffer MS to 1 volume of the sample and mix thoroughly.**
   For 50 ul reaction, add 250 ul of Buffer MS.
   * Do not centrifuge.

2. **Transfer the mixture to a micro spin column.**

3. **Centrifuge at ≥ 10,000 xg for 30 seconds.**
   Discard the pass-through and reinsert the micro spin column back into the collection tube.
   If the mixture volume is more than 700 ul, apply the mixture twice; apply 700 ul of the mixture, spin down, discard the pass-through, re-insert empty collection tube, and repeat the step again until all of the mixture has been applied to the micro spin column.

4. **Apply 700 ul of buffer RNW.**

5. **Centrifuge at ≥ 10,000 xg for 30 seconds.**
   Discard the pass-through and reinsert the micro spin column back into the collection tube.

6. **Centrifuge at ≥ 10,000 xg for an additional 1 minute to remove residual wash buffer.**
   Residual ethanol may interfere with downstream reactions. Care must be taken at this step for eliminating the carryover of buffer RNW.

7. **Transfer the micro spin column to a new 1.5 ml tube (provided).**

8. **Apply 50 ul of RNase-free water to the center of the membrane in the micro spin column. Let it stand for 1 minute, and centrifuge at ≥ 10,000 xg for 1 minute.**
   To obtain more concentrated RNA solution, apply 20 ul of RNase-free water. The yield can be significantly decreased if the volume of eluent is lower than 20 ul. Purified RNA can be stored at 4℃ for immediate analysis and stored at -70℃ for long term storage.

Troubleshooting Guide

Problem	Possible cause	Suggested solution
Poor quality and yield of RNA	Incorrect procedure	Buffer MS and samples should be mixed completely. Do not centrifuge after mix.
	Improper storage of kit	Store kit components at room temperature. Storage at low temperature may cause salt precipitation. Keep bottles tightly closed in order to avoid evaporation or contamination.
	RNase-free water applied incorrectly	Ensure that RNase-free water is applied to the center of membrane.
	Too much volume of RNase-free water	Reduce the volume of eluent.
Degradation of RNA	Contamination of RNase	RNase can be introduced during use. Be certain not to introduce any RNases during the procedure or later handling. Keep tubes closed whenever possible during the preparation.
	Improper storage of RNA	Store isolated RNA at -70ºC, Do not store at -20ºC.
Genomic DNA contamination	Starting sample has high DNA mass	At step 1, 1 ul of DNase I can be used for upto 25 ug of DNA contaminants. Increase the DNase I upto 2 ul or decrease the starting sample down to 50 ul.
	DNase I not active	For prolonged activity, aliquot the DNase I into small portion. Do not freezing and thawing the aliquots several times.
RNA does not perform well in downstream application	Residual ethanol remains in eluate	To remove any residual ethanol included in buffer RNW from micro spin column membrane, centrifuge again for complete removal of ethanol (step 6).