GeneAll® Product Information

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

Products	Capacity	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	spin	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*

Products	Capacity	Size	Cat. No
GenEx™ B	mini	100†	220-101
GenEx™ B	mini	500†	220-105
GenEx™ B	MAXI	100††	220-301
GenEx™ C	mini	100†	221-101
GenEx™ C	mini	500†	221-105
GenEx™ C	MAXI	100††	221-301
GenEx™ T	mini	100†	222-101
GenEx™ T	mini	500†	222-105
GenEx™ T	MAXI	100††	222-301

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

DirEx™	Solution	50	250-050

GeneAll® RiboEx™ *for preparation of total 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
Ribospin™	spin	50	304-150
Ribospin™ vRD	spin	50	302-150
Ribospin™ vRD *plus!*	spin	50	312-150
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
Hotstart Taq DNA polymerase	(2.5 U/㎕)	250 U	531-025
Hotstart Taq DNA polymerase	(2.5 U/㎕)	500 U	531-050
Hotstart 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 Master mix	0.5 ml x 2 tubes	2x	511-010
Taq Master mix	0.5 ml x 2 tubes	2x	511-050
α-Taq Master mix	0.5 ml x 2 tubes	2x	512-010
α-Taq Master mix	0.5 ml x 2 tubes	2x	512-050
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
Taq Premix (w/o dye)	96 tubes	20 ㎕	524-200
α-Taq Premix (w/o dye)	96 tubes	50 ㎕	525-200
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. 312-150

Size: 50 prep

Ribospin™ vRD *plus!*

Kit Contents

Components	Quantity	Storage
Buffer VL	30 ml	Room temperature (15 ~ 25°C)
Buffer RB1	40 ml	
Buffer RBW	30 ml	
Buffer RNW	30 ml	
Nuclease-free water	15 ml	
Carrier RNA*	270 ug	
GeneAll® Column type V	50	
2 ml collection tube	50	
1.5 ml microcentrifuge tube	50	

* Refer to page 3 for carrier RNA

Product Specifications

Ribospin™ vRD *plus!* Specifications	
Type	Spin
Maximum volume of starting samples	300 ul / prep
Preparation time	~ 15 minutes
Maximum loading volume	750 ul
Minimum elution volume	30 ul

Quality Control

Ribospin™ vRD *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

Ribospin™ vRD *plus!* should be stored at room temperature (15 ~ 25°C). All components are stable for 1 year.

Precautions

The buffers included in Ribospin™ vRD *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 VL, RB1, and RNW contain 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

Ribospin™ vRD *plus!* provides a convenient method for isolation of RNA and DNA from cell-free fluid, cell-culture supernatant, plasma, serum, swab, urine, and virus-infected samples.

Ribospin™ vRD *plus!* procedures employed the glassfiber membrane technology for the fastest and the most convenient of high purity RNA and DNA isolation, instead of conventional alcohol precipitation or phenol/chloroform extraction.

Ribospin™ vRD *plus!* buffer system provides the effective binding condition of RNA and DNA to glassfiber membrane through mix with lysis and binding buffers. And then the impurities on the membrane are washed away by two different wash buffers. At last, pure RNA and DNA are eluted by nuclease-free water. Whole procedure may take only 15 minutes and the eluate is suitable for PCR, RT-PCR, or any downstream application without further manipulation.

Ribospin™ vRD *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 labware 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 Ribospin™ vRD *plus!*

1. **Transfer upto 150 (300) ul sample (swab-storage media, cell-free fluid, cell-culture supernatant, plasma, serum, urine) in 1.5 ml microcentrifuge tube.**

2. **Add 250 (500) ul of buffer VL and 5 ul of carrier RNA to the tube and mix the sample by pipetting or vortexing.**
   Check buffer VL for precipitation. If happened, dissolve precipitate completely by incubation at 37°C or above.
   The volume of buffer VL can be adjusted in proportion to the volume of sample.
   For proper lysis, the complete mix of sample and buffer VL is essential.

3. **Incubate the lysate for 10 minutes at room temperature.**
   After this step, briefly centrifuge the tube to remove drops from the inside of the lid.

4. **Add 350 (700) ul of buffer RB1 to the lysate and mix thoroughly by inverting or vortexing.**
   The volume of buffer RB1 can be adjusted in proportion to the volume of lysate.
   * Do not centrifuge.

5. **Transfer upto 750 ul of the mixture to a mini spin column.**

6. **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.
   If the sample volume exceeds 750 ul, repeat step 5 ~ 6 with the remainder of the sample.

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

10. **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.

11. **Centrifuge at ≥ 10,000 x g for an additional 1 minute at room temperature to remove residual wash buffer.**
    Transfer the mini spin column to a new 1.5 ml microcentrifuge tube (provided).
    Residual ethanol may interfere with downstream reactions. Care must be taken at this step for eliminating the carryover of buffer RNW.

12. **Add 30 ~ 50 ul of nuclease-free water to the center of the membrane in the mini spin column. Let it stand for 1 minute.**

13. **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.

Carrier RNA

This kit is provided with carrier RNA, which can be added to at lysis step if required. Carrier RNA enhances binding of nucleic acid to the mini spin column membrane, especially if there are very few target molecules in the sample.

For purification of nucleic acid from very small amounts of sample, we recommend adding carrier RNA at lysis step. To obtain a solution of 5 ug/ul, add 270 ul of nuclease-free water to the tube containing 270 ug lyophilized carrier RNA. Dissolve the carrier RNA thoroughly, divide it into conveniently sized aliquots, and store at -20°C. Don't freeze-thaw the aliquots of carrier RNA more than 3 times. For one preparation, 5 ul of dissolved carrier RNA is required.

Troubleshooting Guide

Problem	Possible cause	Suggested solution
Low yield	Poor quality of starting material	Repeated freezing and thawing should be avoided.
	Low concentration of virus in the sample	Use more sample. Concentrate the sample volume to 300 ul using a microconcentrator.
	Sample not homogenized completely	Be sure to incubate for 10 minutes at room temperature after lysis. For proper lysis, the complete mix of sample and buffer VL is essential.
	Incorrect elution conditions	Add nuclease-free water to the center of the mini spin column membrane and perform incubation for 1 minute before centrifugation.
	Precipitation of buffer VL	Storage at low temperature may cause precipitation in buffer VL. For good result, any precipitate in the buffer should be dissolved completely by incubating the buffer at 37°C (or above) until it disappears.
	Degradation of RNA	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.
	Buffer RBW and RNW used in the wrong order	Ensure that buffer RBW and RNW are used in the correct order in the protocol. If used in the wrong order, perform the last washing step with RNW.
Eluate does not perform well in downstream application	Residual ethanol remains in eluate	To remove any residual ethanol included in buffer RNW from mini spin column membrane, centrifuge again for complete removal of ethanol (step 12).
	Buffer RBW and RNW used in the wrong order	Ensure that buffer RBW and RNW are used in the correct order in the protocol. If used in the wrong order, perform the last washing step with RNW.