Magnetic Beads gSYNC DNA Extraction Plate Kit

96 Well Cell/Tissue gDNA Extraction Plates (MGSP096)

Sample : 5x10^6 cultured cells/ 20 mg of animal tissues
Format : 96 well extraction plates
DNA purity : OD 260/280 >1.8
Equipment : Geneaid SYNC Nucleic Acids Extraction System
Operation time : 120 minutes/ 32 tests (including tissue lysis)
Elution volume : 100 µl

CERTIFICATE NO. QAIC/TW/50077

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Introduction

Geneaid Magnetic Beads gSYNC DNA Extraction Plate Kit was designed for high-throughput purification of high-quality of genomic DNA from cultured cells and animal tissues. Genomic DNA is bound to the surface of the magnetic beads and released using a proprietary buffer system. The 96 well gDNA extraction plates can be easily adapted to Geneaid SYNC Nucleic Acids Extraction System (S032) and other similar automated extractors. The purified DNA can be used in qPCR and a variety of other downstream applications.

Quality Control

The quality of Magnetic Beads gSYNC DNA Extraction Plate Kit is tested on a lot-to-lot basis according to Geneaid's ISO-certified quality management system by isolating genomic DNA from cultured cell samples.

Kit Contents

Component	MGSP096	Description
Extraction Plates	6	96 well plate with reagent buffers
Proteinase K[1]	11mg x2	Preparing 10mg/ml Proteinase K
MGS1 Buffer	30ml	For cells lysis
PR Buffer	15ml	For cell debris removal
Strip	12	8-channel strip
Protocol	1	Instruction manual for user

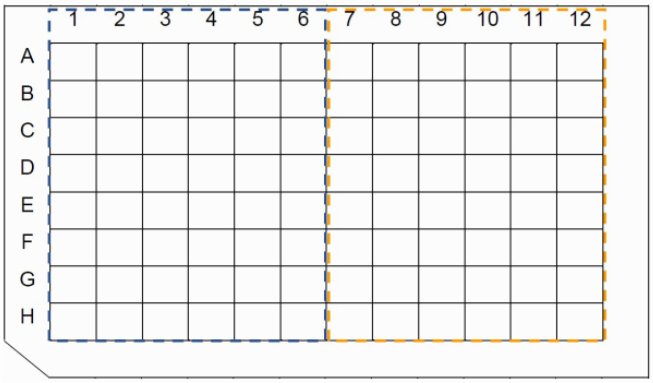
[1]Add 1.1 ml of sterile ddH_2O to each Proteinase K tube then vortex to ensure it is completely dissolved. For extended periods, the Proteinase K solution should be stored at 4ºC.

Storage conditions

- Components under room temperature (15~35°C) can be stored until the expiration date labeled on the box.
- The Proteinase K is shipped at room temperature. After adding ddH_2O to dissolve Proteinase K powder, store the Proteinase K solution at 4ºC.

Extraction Plate Contents

Column	Buffer	Volume
# 1/7	Lysis Buffer	600 µl
# 2/8	Wash Buffer 1	800 µl
# 3/9	Wash Buffer 1	800 µl
# 4/10	Wash Buffer 2 with Magnetic Beads	800 µl
# 5/11	Wash Buffer 2	800 µl
# 6/12	Elution Buffer	100 µl



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Important before use

1. Inspect the completeness of the Extraction Plates and Strips.
2. Do not shake the Extraction Plates vigorously to avoid the excess foam formation.
3. Remove the aluminum foil carefully to avoid splashing of the reagent solution.
4. After removing the aluminum foil, do not expose plates to air for a long time to avoid evaporation and changing pH then affecting purification efficiency.
5. Buffers contain chaotropic salt. During operation, always wear a lab coat, disposable gloves, protective goggles and (anti-fog) procedure mask. Guanidine salts can form highly reactive compounds when combined with bleach. **DO NOT** add bleach directly to the sample-preparation waste.

Magnetic Beads gSYNC DNA Extraction Plate Kit Protocol

Sample Preparation	• **Cultured cells:** Transfer cells (up to 5×10^6) into a 1.5 ml microcentrifuge tube then centrifuge at 300 x g for 5 minutes. Discard the supernatant then resuspend cells in 200 µl of PBS by pipetting. Add **20 µl of Proteinase K** then mix well by vortex and incubate at 60ºC for 10 minutes. • **Animal tissue:** Transfer up to 20 mg of animal tissue into a 1.5 ml microcentrifuge tube. Add **200 µl of MGS1 Buffer** and **20 µl of Proteinase K** then vortex thoroughly. Incubate the 1.5 ml tube in a thermomixer or heated orbital incubator at 60ºC with shaking at 900 rpm 1-2 hours or until the sample lysate becomes clear. Add **80 µl of PR Buffer** then vortex for 10 seconds. Centrifuge at 12-16,000 x g for 3 minutes to remove the insoluble debris and take 200 µl of the clear supernatant as the sample for the following process.
Automatic gDNA Extraction	• Carefully remove the aluminum foil from Extraction Plate. • Transfer **200 µl of supernatant** into column #1/#7 of Extraction Plate. Optional RNA removal: add 5 µl of RNase A (50 mg/ml) into column #1/#7 of Extraction Plate. • Turn on the **Geneaid SYNC Nucleic Acids Extraction System**. • Place the Extraction Plates on the plate rack of the **Geneaid SYNC Nucleic Acids Extraction System** and push the plate rack back into the extraction system. Note: Make sure that the missing corner of Extraction Plate faces toward the door panel. • Push strips completely to the bottom of strip rack frame. • Close the door panel. • Select the program "**MGSP**". Please see the program below. • Once the program has ended, buzzer shall alarm. Take out Extraction Plate carefully. • Transfer the purified nucleic acid from column #6/ #12 to clean tubes. The purified nucleic acid can be used for subsequent experiments such as real-time PCR immediately or store at -20˚C for long time. • The used Extraction Plates and Strips should be regarded as medical waste with risk of biological infection and properly disposed of in accordance with national regulations.

MGSP Program

Run	Well No. (0-6)	Name	Standby (0-30Min)	Mix (1-30Min)	Volume (100-1000µl)	Mix Speed (1-3)	Mag (0-120Sec)	Temp. (40-80˚C)	Pause
☑	4	Bead Transfer	0	1	800	2	30	60	☐
☑	2	Bead Active	0	1	800	2	0	60	☐
☑	1	Lysis	0	10	800	1	0	60	☐
☑	2	Bead Transfer	0	1	800	2	30	60	☐
☑	1	Binding	0	10	800	2	60	60	☐
☑	2	Wash 1	0	3	800	2	30	60	☐
☑	3	Wash 2	0	3	800	2	30	60	☐
☑	4	Wash 3	0	2	800	2	30	60	☐
☑	5	Wash 4	0	2	800	2	30	60	☐
☑	6	Elution	10	5	100	2	120	60	☐
☑	5	End	0	1	800	2	0	0	☐

Geneaid Biotech Ltd.
16F, No. 112, Sec. 1, Sintai 5th Rd., Sijhih Dist, New Taipei City 221, Taiwan, R.O.C

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