High-Q™ Magnetic-16 Genomic DNA Purification Kit

(for blood, swab, saliva, urine, cell culture supernatants and rinse liquid from nasopharyngeal or oropharyngeal swabs)

Ordering info

TBK0215, 480 reactions

TBK0216, 480 reactions (30 prefilled plates)

TBK0217, 192 reactions (12 prefilled plates)

TBK0218, 96 reactions (6 prefilled plates)

Description

High-Q™ Magnetic-16 Genomic DNA Purification Kit is a new generation of nucleic acid purification kits intended for automated purification systems. It is based on magnetic beads technology for purification of biomolecules. High-Q™ Magnetic beads use is combined with heating steps enhancing sample lysis and elution. The samples are firstly lysed and the nucleic acids are bound to the surface of silica-coated paramagnetic beads in the presence of a chaotropic salt. Nucleic acid bound to the beads is then efficiently washed and eluted using a magnetic separation device, removing contaminants. High-Q™ Magnetic-16 Genomic DNA Purification Kit allows medium high-throughput DNA purification.

Features

- High throughput, 32 samples in less than 45 minutes.
- Quick and convenient DNA extraction from different samples.
- Yield between 2-6 µg of gDNA from fresh blood; 1-3 µg of gDNA from saliva.
- Highest DNA quality for all downstream applications.

Applications

- Standard and quantitative PCR
- Genotyping

Robotic Instrument

Use 8-tip combs robotic platforms such as Ideal 32, Bioer GenePure Pro-32, Biobase BNP32 system, RoboPrep® 32 or equivalent systems.

Kit Components

Components	TBK0215	TBK0216	TBK0217	TBK0218
Proteinase K[a]	5x 24 mg	5x 24 mg	2x 24 mg	24 mg
PK Resuspension Buffer	5x 1.1 mL	5x 1.1 mL	2x 1.1 mL	1.1 mL
High-Q™ Magnetic Beads	100 mL	200 µL*	200 µL*	200 µL*
BTS Lysis Buffer	2x 150 mL	600 µL*	600 µL*	600 µL*
BTS Washing Buffer 1	2x 18 mL[b]	700 µL*	700 µL*	700 µL*
MWB 2	2x 50 mL[c]	700 µL*	700 µL*	700 µL*
MWB 3	2x 50 mL[d]	700 µL*	700 µL*	700 µL*
EB Buffer	50 mL	85 µL*	85 µL*	85 µL*
96-deep well Plate	30**	30***	12***	6***
8-Tip Combs	60	60	24	12

** per well* *** empty* **** prefilled*

Order Info Kit Components: *Proteinase K (TBZ0306) | PK Resuspension Buffer (TBB0546) | BTS Lysis Buffer (TBB0536) | BTS Washing Buffer 1 (TBB0537) | Magnetic Washing Buffer 2, MWB2 (TBB0542) | Magnetic Washing Buffer 3, MWB3 (TBB0543) | Elution Buffer (TBB0510) | 96-deep well plate (TBM 0031) | 8-tip combs (TBM0035).*

Before its use

[a] Proteinase K Solution: Add 1 mL PK Resuspension Buffer to the Proteinase K powder. Stable > 2 months at 4°C. For long term storage, -20 °C.

[b] Add 155 mL isopropanol (CAS 67-63-0) each. Mix well by pipetting!!

[c] Add 120 mL absolute ethanol (CAS 64-17-5) each.

[d] Add 120 mL absolute ethanol (CAS 64-17-5) each.

Storage

Store Proteinase K powder at -20°C.

Store all other components at 25 °C.

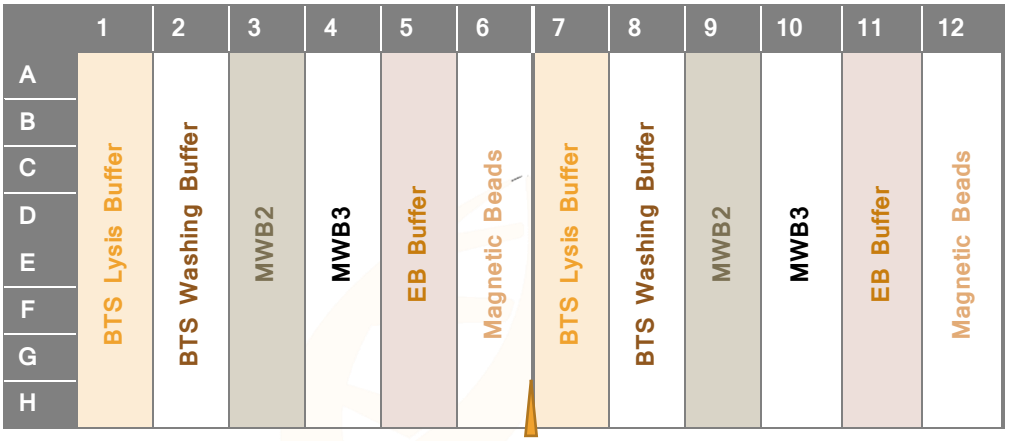
Quality Control

Each lot is tested by a functional assay.

PROTOCOL

I. Preparation of processing plates for 8-tip combs robotic system

96-deep well plates are provided. Each plate allows the isolation of 16 samples. Two plates can be run in parallel.



- Columns 1 and 7: Add 600 µL BTS Lysis Buffer
- Columns 2 and 8: Add 700 µL BTS Washing Buffer 1.
- Columns 3 and 9: Add 700 µL Magnetic Washing Buffer 2 (MWB2)
- Columns 4 and 10: Add 700 µL Magnetic Washing Buffer 3 (MWB3)
- Columns 5 and 11: Add 85 µL EB buffer
- Columns 6 and 12: Add 200 µL Magnetic Beads

During storage precipitates may form in some buffers. Dissolve such deposits by warming the solution at 37 °C and gently shaking.

II. Protocol for direct nucleic acid extraction from whole blood and cell-free samples (*serum, plasma, ascites, urine, cell culture supernatants and rinse liquid from nasopharyngeal or oropharyngeal swabs*).

A. AUTOMATIZED WORKFLOW

96-deep well plates are provided. Each plate allows the isolation of 16 samples. Two plates can be run in parallel.

1. Put the 96-well plate at room temperature.
2. Spin the plate.
3. Take off the aluminum foil.
4. Check that plate is properly oriented to dispense samples, that is, that A1 well is at left upper corner and add 200 µL of samples and 10 µL Proteinase K Solution to wells in the columns 1 and 7.
5. Plug 8-strip comb into the rack for tip insertion in the instrument (*see manual of instrument for details*).
6. Put 96-well plate into the instrument with A1 well at left upper corner and use the following program (*see manual of instrument for details*) with heating at 70 °C in lysis step and elution step (*in bold*):

Step	Well	Name	Waiting Time*	Mixing Time*	Magnet Time*	Mixing Method	Collection Method	T (°C)	Volume (µL)
1[a]	1	Lysis	00:00	02:00	00:00	Slow	Normal	70°C	800
			00:00	10:00	00:00	Paused	Normal		
2	6	Beads	00:00	00:30	00:30	Fast	Strong		200
3	1	Binding	00:00	10:00	00:60	Slow	Strong		900
4	2	Wash 1	00:00	05:00	00:30	Medium	Strong		700
5	3	Wash 2	00:00	04:00	00:30	Fast	Strong		700
6	4	Wash 3	00:00	04:00	00:30	Fast	Strong		700
7[b]	5	Elution	03:00	05:00	01:30	Fast	Strong	70°C	85
8	6	Discard	00:00	00:30	00:00	Fast	Normal		200

* *Minutes: seconds* [a] *Lysis Heat Stop in step 2* [b] *Elution Heat Start step 7*

7. Once the program has finished, recover eluted nucleic acid from each well on columns 5 and 11. Store DNA at -20°C.