User's Manual

Product: Serum DNA Isolation Kit

Catalog Number: K5018100

Shipping Condition: Room temperature

Introduction
The Serum DNA Isolation Kit is designed for the purification of genomic DNA fragment from serum, plasma, and bio fluid in a spin column format. No phenol-chloroform extraction, no Protease and no precipitation steps are involved. The sample addition and washing steps can be performed using compatible vacuum manifold, while the final elution of the DNA product are performed using a table-top centrifuge.
The samples are first treated in the binding buffer that contains the denaturant guanidine HCl and Triton X100. Ethanol is then added to the samples, which are then added to the filter spin columns. This step facilitates the binding of DNA to the filter matrix. Under these conditions the DNA binds to the membrane while other contaminants are washed through. The columns are then washed to further remove protein, buffer components and other contaminants using two ethanol-containing wash buffers and the final genomic DNA product is eluted in TE. The final DNA product can be used directly for quantitative PCR and other downstream applications.

Feature
- No phenol-chloroform
- No protease
- No precipitation
- Total <15 min.
- Sample range: 200 µl

Kit Contents

Item	Part #	Amount	Storage
1. Lysis Binding Buffer	K5018100-1	21 ml	RT
2. Wash Buffer 1	K5018100-2	26 ml	RT
3. Wash Buffer 2	K5018100-3	12 ml	RT
4. TE	K5018100-4	10 ml	RT
5. spin column set	K5018100-5	100 units	RT

Storage Conditions
All of contents of the Serum DNA Isolation Kit including the buffers should be stored at room temperature. The kit is stable for one year under these conditions.

Technical Assistance
Please refer any technical questions to TechSupport@biochain.com.

Important Notes Before Using The Serum DNA Isolation KIit
Sample Size and Type
The Serum DNA Isolation Kit can be used to isolate genomic DNA using a spin column format. DNA can be isolated quantitatively from serum, plasma, or other bio fluid.
Buffer Concentrates
Wash buffers 1 and 2 are provided as concentrates that require the addition of 100% ethanol to them before use.
Reagents and Equipment to be Supplied by the User
• Pipetteman (multichannel pipettors desirable)
• 1.5 ml tubes

• Disposable gloves
• 100% ethanol
• Distilled deionized water
• A table-top centrifuge capable of providing >13k rpm rotor.

Protocol
Before starting: The wash buffer 1 concentrate requires the addition of 26 ml of 100% ethanol before it can be used, while the wash buffer 2 concentrate requires that 48 ml of 100% ethanol is added to it before use. Both of the wash buffers are stable for one year after the addition of ethanol.
1. Transfer (up to) 200 µl of serum or plasma into a 1.5 ml tube. Add 200 µl of binding buffer per tube. Pipette up and down until mix well, cap the tube and incubate at room temperature for 10 min.
2. Add the contents to the filter column. Spin down the column at 13k rpm for one minute and discard the spin through liquid.
3. Wash the column by adding 500 µl wash buffer 1 (which contains the added ethanol) per column and spin the column as above condition.
4. Wash the column once by adding 600 µl wash buffer 2 (which contains the added ethanol) and spin the column as above.
5. Discard the liquid in the collection tube and spin the column one more minutes as above condition.
6. Place the column onto a new 1.5 ml tube for DNA sample elution. Add 50 µl of TE per column and wait one min., and then centrifuge at 13k rpm for 1 min. to elute the final DNA product.

The use of 30 µl elution rather than 50 µl elution steps will provide you with a more concentrated DNA product, however the absolute yield of DNA will be reduced and the intrawell variation increased.

Kit Performance
Yield of DNA fragment isolated from biological samples using the EZ-Serum DNA Kit is normally below 1 µg and are therefore difficult to determine with a spectrophotometer or other DNA detection method. Quantitative amplification methods (such as PCR) are recommended for determination of yield.

Related Products
EZ-Blood DNA 96 Kit, Cat#. Z7040008
EZ-DNA 96 Kit, Cat#.Z7040006
Genomic DNA Extraction Kit, Cat# K5016005
Blood DNA Isolation Kit, Cat# K5017100

Trouble Shooting

Problem	Comments and Suggestions
Little or no DNA eluted	Remove all traces of supernatant before beginning. All buffers must be at room temperature. Ensure that vacuum draws all liquid through filter membrane at each step. Measure final elution volume - ensure adequate final elution from final centrifugation steps.
Filters clog	Too much DNA/cells used. Reduce sample size.
Filters tear	Reduce centrifugation speed.

Serum DNA Isolation Kit
Experienced Users Miniprotocol

1. 200 µl serum & 200 µl binding buffer, mix, 5 min @ RT.
2. 500 µl wash buffer 1, spin @13k rpm, 1 min.
3. 600 µl wash buffer 2, spin @13k rpm, 1 min.
4. spin @13k rpm, 1 min.
5. transfer the column onto collection tube, 50 µl of TE, incubate 1 min., spin @13k rpm, 1 min.

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