

ZiXpress® Viral DNA/RNA Extraction Kit



【Cat. No. and Packaging Specifications】

312B021A - Pre-filled Reagents for 96 Tests/Box (8 Tests/Plate × 12 Plates)

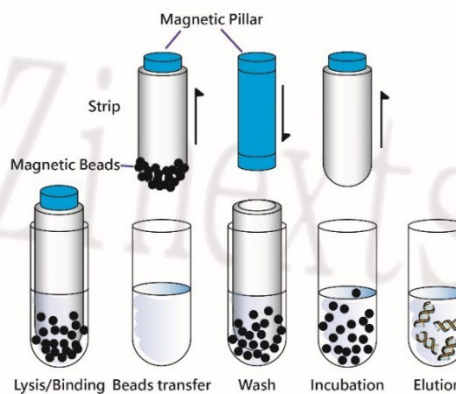
312B021B - Pre-filled Reagents for 192 Tests/Box (16 Tests/Plate × 12 Plates)

312B021C - Non Pre-filled Reagents for 960 Tests/Box (16 Tests/Plate × 60 Plates)

【Introduction - ZiXpress® Magnetic Pillar Technology】

Zinexts Life Science is specialized in developing advanced, efficient, and reliable technologies in nucleic acid purification, enabling successful delivery of extraction results from varied sample types. The ZiXpress® Nucleic Acid Purification Platform utilizes permanent magnet rods to collect magnetic beads from the solution and release the beads into wells containing reagent for the next step of extraction.

The purification process contains four basic steps: sample lysis, nucleic acid binding, washing and elution. The effectiveness of bead collection and transfer ensures superior washing and elution efficiency.



Product Name	ZiXpress® Viral DNA/RNA Extraction Kit
Catalogue Number	312B021A, 312B021B, 312B021C
Applicable Instrument Model	ZiXpress® 32 & ZiXpress® 64 (First & Second generation) Instrument
Displayed Protocol Name on The Instrument	Virus Virus-S (RAPID)
Processing Time	ZiXpress® 32 series 30 minutes ZiXpress® 64 series 30 minutes (RAPID : 10 minutes)

【Intended Use】

The product purpose is to extract and purify viral nucleic acids from serum, plasma, cerebrospinal fluid (CSF), cell-free body fluids or clinical swab samples. The elution product has high purity and complete fragments. The nucleic acids purified by using the ZiXpress® assortment are suitable for a variety of biological samples, which are essential and broadly used in many molecular biology downstream applications such as genetic screening, sequencing, food safety, forensic, etc.

【Kit Content】

Catalogue Number: 312B021A, 312B021B

	312B021A	312B021B
Components	Quantity	
Reagent 96 Plate (Pre-filled)	(8 x 12) 96	(16 x 12) 192
8-Tip Comb	(8 x 12) 96	(16 x 12) 192
Binding Buffer 5	36 ml x 1	72 ml x 1
Proteinase K (10 mg/ml)	1.5 ml x 1	1.5 ml x 2

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Components	Quantity
2.2 ml Deepwell 96 plate (Non Pre-filled)	(16 x 12 x 5) 960
8-Tip Comb	(16 x 12 x 5) 960
Proteinase K (10 mg/ml)	15 ml x 1
Magnetic Beads B	40 ml x 1
Lysis Buffer B	260 ml x 1
Wash Buffer Z2	900 ml x 1
Wash Buffer A	900 ml x 1
Wash Buffer B	900 ml x 1
RNase-free water	150 ml x 1
Binding Buffer 5	360 ml x 1
Single Strip* (optional) (Non Pre-filled)	(12 x 16 x 5) 960
Adapter* (optional)	(2X5)

【 Reagent Plate Content 】

Well No.	Components	Volume
1/7	Lysis Buffer B	260 μ l
2/8	Wash Buffer Z2	900 μ l
3/9	Wash Buffer A and Magnetic Beads	940 μ l
4/10	Wash Buffer B	900 μ l
5/11	Empty	-
6/12	RNase-free water	150 μ l

【 Storage & Stability 】

Reagent Plate and Accessory Consumables should be stored at room temperature. **Do not** freeze the Reagent Plate. Proteinase K is suggested to be stored at 2-8°C. Zinexts Life Science guarantees that all components are stable for 18 months when stored properly.

【 Sample Requirements 】

- a. Sample type: serum, plasma, cerebrospinal fluid (CSF), cell-free body fluids or clinical swab samples.
- b. Sample storage: Fresh or stored at 2-8°C for up to 24 hours. For long-term storage, freezing at -20°C is recommended.
- c. Sample volume: 200 μ l

【 Elution Requirements 】

- a. Elution volume: 150 μ l
- b. Store the purified nucleic acid at 4°C (short-term, less than 10 days) or aliquot and store at -70°C (long-term) before performing the downstream analysis.

【 Operation Protocol 】

1. Sample Preparation

- a. The table below describes the recommendations in virus collection from different kind of sample type:

Sample type	Procedure
For serum, plasma, cerebrospinal fluid (CSF)	<ol style="list-style-type: none"> 1. Transfer each 200 μl sample to Well 1 and Well 7. 2. If the sample volume is lower than described, please

<p>or cell-free body fluids.</p>	<p>complete the volume with appropriate amount of PBS.</p>
<p>For swab samples</p>	<ul style="list-style-type: none"> ● <u>Swab without preservation solution:</u> <ol style="list-style-type: none"> 1. Collect swab samples in 1 ml PBS. 2. Vortex the collection tube and incubate for 30 minutes at room temperature. 3. Transfer 200 µl sample to Well 1 and Well 7. ● <u>Swab in liquid-based preservation solution:</u> <ol style="list-style-type: none"> 1. Collect swab samples in liquid transport media. 2. Vortex the collection tube and incubate for 30 minutes at room temperature. 3. Transfer 200 µl sample to Well 1 and Well 7.

2. Consumables Preparation

- a. Turn on the power switch and wait for the screen to show the Home Page.
- b. Set up the 8-Tip Combs on the 8-Tip Comb track, and make sure the 8-Tip Combs enter the track completely.

3. Reagents Plate Preparation

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- a. Remove the aluminum foil sealing membrane on the reagent plate carefully and avoid liquid splashing. Add 200 µl viral samples to Well 1 and Well 7, which contains the pre-filled lysis buffer. Mix the sample with the lysis buffer 3-5 times by pipetting gently.
- b. Add 15 µl Proteinase K to Well 1 and Well 7 and mix 3 times by pipetting gently.
- c. Add 360 µl Binding Buffer 5 to Well 1 and Well 7.

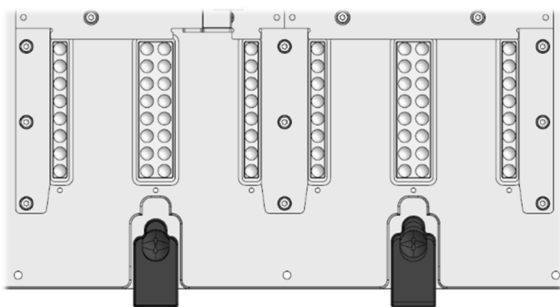
Catalogue Number: 312B021C

- a. Load the specified buffer into specified wells of the 96 Plate according to Reagent Plate Content listed above.
- b. Optional (Single Strip method): Put the Single Strip* on the Adapter* and use it as Reagent Plate.
 - * Single Strip and Adapter could be purchased from Zinexts.
- c. Add 200 µl viral samples to Well 1 and Well 7, which contains the pre-filled lysis buffer. Mix the sample with lysis buffer 3-5 times by pipetting gently.
- d. Add 15 µl Proteinase K to Well 1 and Well 7 and mix 3 times by pipetting gently.
- e. Add 360 µl Binding Buffer 5 to Well 1 and Well 7.

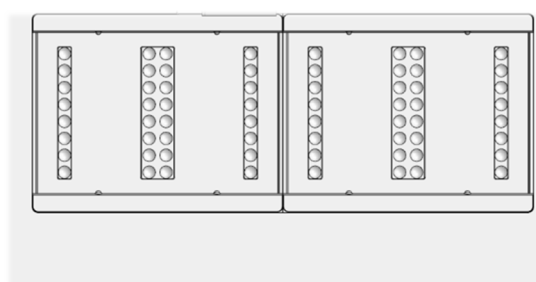
4. Automated Extraction Setup

- a. (1) Put the reagent plate on the plate track and release heater locks. (For first generation)
- (2) Insert the reagent plate into the plate track and ensure it fit well. (For second generation)
- (Note: Please check the direction of “recognition corner” on the Reagent 96 plate, it must be on the left.)
- (3) Optional - ZP02201-960 (Single Strip method): Please follow step (2) to insert the Adapter (Reagent Plate) into the plate track and ensure it fit well. (For second generation)

First generation:



Second generation:



- b. Close the instrument door.
- c. Protocol Selection: Select the appropriate protocol on the instrument or edit a new protocol on the blank space. (Page1 to Page 12)

Virus process as below: (Process time: 30 minutes)

Step No.	Well	Name	Standby (min)	Mix (min)	Volume (µl)	Mix Speed	Mag (sec)	Temp (°C)
1	3	Transfer	0	1	900	3	60	--
2	1	Lysis	0	15	900	3	60	80
3	2	WASH 1	0	1	900	3	60	80
4	3	WASH 2	0	1	900	3	60	80
5	4	WASH 3	0	0	900	3	60	80
6	6	ELUTE	0	5	120	3	60	80
7	4	WASTE	0	1	900	3	0	--

Virus-S process (Rapid virus extraction) as below: (Process time: 10 minutes)

Step No.	Well	Name	Standby (min)	Mix (min)	Volume (µl)	Mix Speed	Mag (sec)	Temp (°C)
1	3	Transfer	0	1	900	3	10	80
2	1	Lys/Bind	0	3	900	3	10	80
3	2	WASH 1	0	1	900	3	10	75
4	3	WASH 2	0	1	900	3	10	75
5	6	ELUTE	1	1	120	3	10	75
6	3	WASTE	0	1	900	3	0	--

- d. Press “▶” to start the process.
- e. After the experiment program is finished, transfer the extracted products located at Well 6 and Well 12 into nuclease-free tubes. Store the purified nucleic acid at 4°C (short-term, less than 10 days) or aliquot and store at -70°C (long-term) before performing the downstream analysis.

【Precautions】

Please read the instructions before using the kit:

- a. When working with chemicals or clinical samples, always wear a suitable lab coat, disposable gloves, and protective goggles. All of the experiment supplies, such as pipettes, tubes, tips must be autoclaved. Operator should wear gloves and masks.
- b. Before usage, the ZiXpress® Nucleic Acid Purification Platform should be disinfected with the internal UV light program. We recommend cleaning the instrument with 75% ethanol and disinfecting it by performing the UV light program in the instrument.
- c. Proteinase K is suggested to be stored at 2-8°C.
- d. After the experiment, all samples and reagents must be properly disposed.
- e. Magnetic beads may occasionally appear in the elution buffer after extraction. If so, please carefully avoid the magnetic beads while transferring the extracted elution product.

Please report any serious incident occurred in relation to the device to your local representative/agent or the manufacturer, and to the competent authority of your country/state.

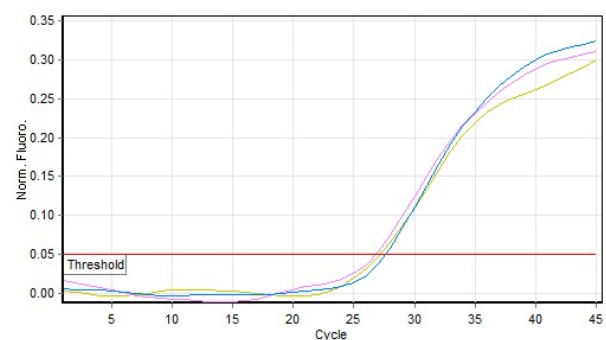
【Starting Material】

Sample Type	Serum, plasma, cerebrospinal fluid (CSF), cell-free body fluids or clinical swab samples
Target Nucleic Acid	Total viral nucleic acids (DNA and RNA)
Sample Volume	200 μ l * If the sample is less than 200 μ l, please add 1X PBS to fill up to 200 μ l.
Controls/Optional Internal Control#	Add controls/internal control in the extraction procedure if needed for the downstream analysis.
Elution Volume	150 μ l

【Expected Purity and Yield】

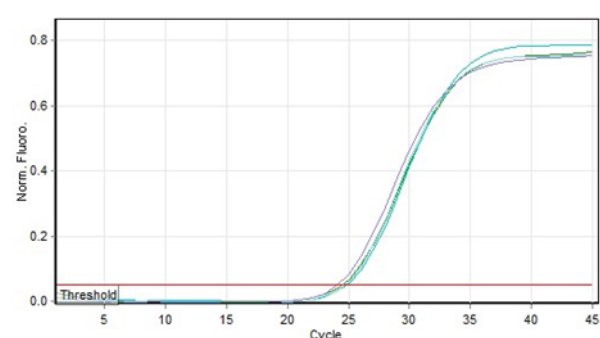
Using HBV serum from patients as sample to extract viral DNA by ZiXpress® Viral DNA/RNA Extraction Kit. 200 μ l sample was extracted and eluted in 120 μ l. 30 μ l elution was used for real-time PCR by AmpliSens® HCV/HBV/HIV-FRT PCR kit. Three repeat samples can be detected, proving the excellent reproducibility of the isolation procedure.

Quantitation data for Cycling A.Green










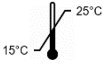




Using HCV serum from patient as sample to extract viral RNA by ZiXpress® Viral DNA/RNA Extraction Kit. 200 μ l sample was extracted and eluted in 120 μ l. 30 μ l elution was used for real-time PCR by AmpliSens® HCV/HBV/HIV-FRT PCR kit. Three repeat samples can be detected, proving the excellent reproducibility of the isolation procedure.

Quantitation data for Cycling A.Green



【Symbols】

The following symbols are used on labels and in Instructions for Use (IFU), in compliance with EN ISO 15223-1 standard.

Symbol	Explanation
	CE mark
	For In Vitro Diagnostic Use
	Catalogue number
	Lot/Batch number
	Sufficient for [n] samples
	Instructions for Use
	Expiry date
	Storage temperature (15°C - 25°C)
	For single use only
	Manufacturer
	European Authorized Representative
	Caution

【Warranty】

Zinexts Life Science is committed to providing our customers with high-quality products and services. Our goal is to ensure that every customer is 100% satisfied with our products and our services. If you have any questions or concerns about our products or services, contact our Technical Support Representatives.

Zinexts Life Science guarantees the performance of all products according to specifications stated on our product literature. The purchasers/users must determine the suitability of the product for their particular use. We reserve the right to change, alter, or modify any product to enhance its performance and design.

This warranty limits Zinexts Life Science Corporation's liability only to the cost of the product. No warranty is granted for products beyond their listed expiration date. No warranty is applicable unless all product components are stored in accordance with instructions.

【Technical Support】

For technical assistance and further information, please visit our website www.zinexts.com, contact our Technical Support or your local distributor.

【Product List】

Catalog Number	Packaging Specification (Adapted System)
312B021A	Pre-filled Reagents for 96 Tests/Box (2 nd generation ZiXpress 32/64)
312B021B	Pre-filled Reagents for 192 Tests/Box (2 nd generation ZiXpress 32/64)
312B021C	Non-Pre-filled Reagents for 960 Tests/Box (2 nd generation ZiXpress 32/64)

【Manufacturer Information】

Manufacturer: Zinexts Life Science Corp.
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Product of Origin: Taiwan (R.O.C.)

【Revision History】

Version	Date	Description
3.7	1 Oct. 2024	Change company logo



Version: 3.7

Rev. Date: 01.10.2024



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