

# ZiXpress® Whole Blood Genomic DNA Extraction Kit



## 【Cat. No. and Packaging Specifications】

**312A021A - Pre-filled Reagents for 96 Tests/Box** (8 Tests/Plate × 12 Plates)

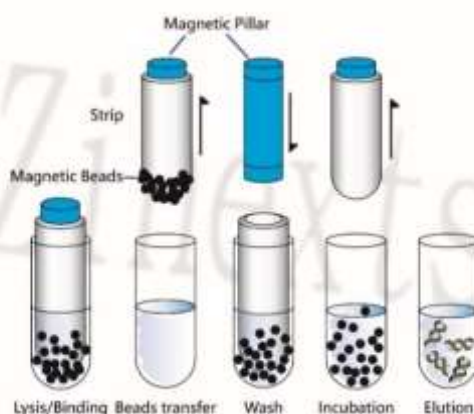
**312A021B - Pre-filled Reagents for 192 Tests/Box** (16 Tests/Plate × 12 Plates)

**312A021C - 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® Blood Genomic DNA Extraction Kit
Catalogue Number	312A021A, 312A021B, 312A021C
Applicable Instrument Model	All ZiXpress® Instrument
Displayed Protocol Name on The Instrument	Blood
Processing Time	ZiXpress® 32 series 42 minutes ZiXpress® 64 series 42 minutes ZiXpress® 96S series 41 minutes

### 【Intended Use】

The product purpose is to extract and purify genomic DNA from whole blood sample. The elution product has high purity and complete fragments. Nucleic acids purified by using the ZiXpress® instrument are suitable for a variety of molecular biology downstream applications such as PCR, qPCR, NGS and other Molecular Biology techniques aimed for genetic screening, sequencing, food safety, forensic, etc.

### 【Kit Contents】

#### Catalogue Number: 312A021A, 312A021B

	ZP02203-096	ZP02203-192
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	30 ml x 1	60 ml x 1
Proteinase K (10 mg/ml)	1 ml x 2	1 ml x 4
Mixing Sleeves (96S only)	(8 x 12) 96	(8 x 24) 192

#### Catalogue Number: 312A021C

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
Mixing Sleeves (96S only)	(8 x 24 X 5) 960
Proteinase K (10 mg/ml)	20 ml x 1
Magnetic Beads B	40 ml x 1
Lysis Buffer A	400 ml x 1
Wash Buffer Z1	900 ml x 1
Wash Buffer A	900 ml x 1
Wash Buffer B	900 ml x 1
Elution Buffer	150 ml x 1
Binding Buffer 5	300 ml x 1

## 【Contents】

Well No.	Components	Volume
1/7	Lysis Buffer A	400 $\mu$ l
2/8	Wash Buffer Z1	900 $\mu$ l
3/9	Wash Buffer A and Magnetic Beads	940 $\mu$ l
4/10	Wash Buffer B	900 $\mu$ l
5/11	Empty	-
6/12	Elution Buffer	150 $\mu$ 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 guarantee that all components are stable for 18 months when stored properly.

## 【Sample Requirements】

- a. Sample type: Mammalian whole blood, buffy coat, etc.
- 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  $\mu$ l

## 【Elution Requirements】

- a. Elution volume: 150  $\mu$ 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. 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.

### 2. Reagents Plate Preparation

#### **Catalogue Number: 312A021A, 312A021B**

- a. Remove the aluminum foil sealing membrane on the reagent plate carefully, to avoid liquid

splashing. Add 200 µl whole blood 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 20 µl Proteinase K to Well 1 and Well 7 and mix 3 times by pipetting gently.

c. Add 300 µl Binding Buffer 5 to Well 1 and Well 7.

**Catalogue Number: 312A021C**

a. Load the specified buffer into specified wells of the 96 Plate according to Reagent Plate Content listed above.

b. Add 200 µl whole blood 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.

c. Add 20 µl Proteinase K to Well 1 and Well 7 and mix 3 times by pipetting gently.

d. Add 300 µl binding buffer to Well 1 and Well 7.

**3. Automated Extraction Setup**

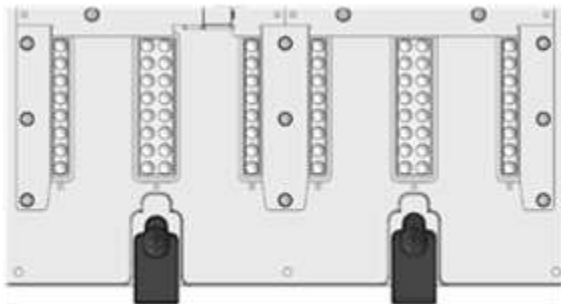
**3-1. ZiXpress 32 & ZiXpress 64**

a. (1) Put the reagent plate on the plate track and release heater locks. (For first generation)

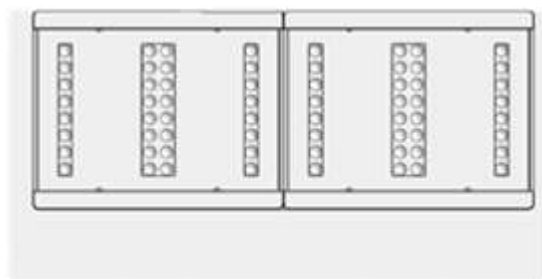
(2) Insert the reagent plate into the plate track and ensure it fit well. (For second generation)

(Note: Please check the direction of “recognition corner” on the Reagent 96 plate, it must be on the left.)

**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)

**Blood process as below: (Process time: 42 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	20	940	2	40	75
3	2	WASH 1	0	3	900	3	40	--
4	3	WASH 2	0	2	900	3	40	--
5	4	WASH 3	0	0	900	3	40	--
6	6	ELUTE	5	5	120	3	60	80
7	4	WASTE	0	1	900	3	0	--

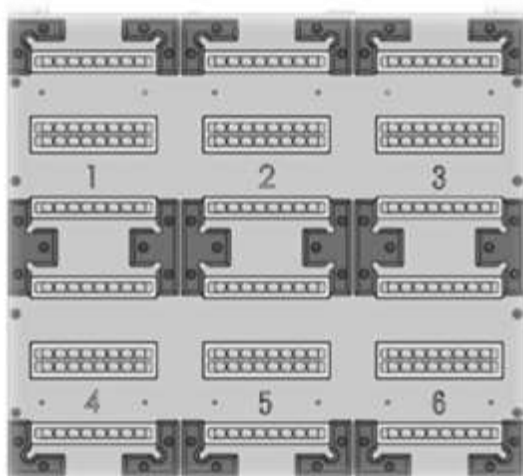
d. Press “▶” to start the process.


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 total 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.

**3-2. ZiXpress 96S**

- a. Set up the Mixing Sleeves on **Well 2** and **Well 8** of Reagent Plate. Make sure Mixing Sleeves are in the right place.
- b. Insert the Reagent Plate into the plate track and ensure it fit well.

(Note: Please confirm the direction of "recognition corner" on the Reagent 96 plate, it must be on the left.)




c. Press “” to close the instrument door.

- d. Protocol Selection: Follow the information in the below list to create a protocol on the instrument.

**Blood process as below: (Process time: 41 minutes)**

Step	Name	Well	Stir	Magnetic	Wait	Speed (rpm)	Volume (μl)	T Control (°C)
1	Transfer	3	01:00	01:00	00:00	1600	900	0
2	Lysis	1	15:00	00:40	00:00	2000	500	75
3	WASH 1	2	03:00	00:40	00:00	2000	500	60
4	WASH 2	3	02:00	00:40	00:00	2000	500	60
5	WASH 3	4	00:10	00:40	03:00	2000	500	60
6	ELUTE	6	08:00	01:00	00:00	2500	110	80
7	WASTE	4	01:00	00:00	00:00	1000	900	0

- e. Press “” to start process.
- f. 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:**

- 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.
- Before using the ZiXpress® Nucleic Acid Purification Platform, should it 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.
- Proteinase K is suggested to be stored at 2-8°C.
- After the experiment, all samples and reagents must be properly disposed.
- 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】

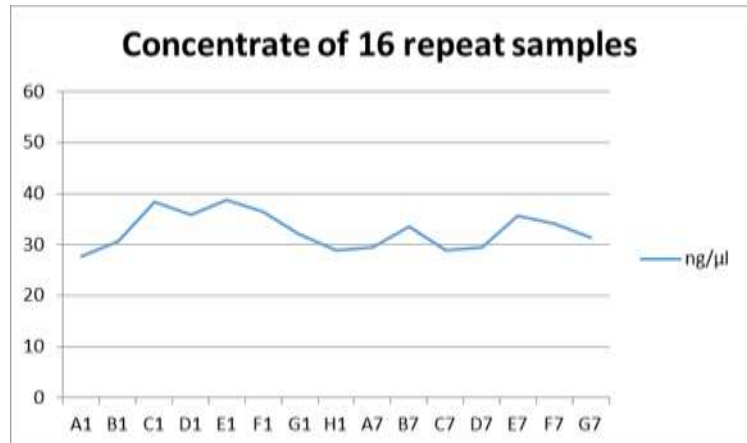
<b>Sample Type</b>	Mammalian whole blood, buffy coat, leukocyte concentration
<b>Target Nucleic Acid</b>	Total DNA (genomic DNA, mitochondrial and/or viral DNA)
<b>Sample Volume</b>	200 ul whole blood ( <b>WBC count less than <math>1 \times 10^4</math> cells/ml</b> ) leukocyte concentration ( <b>no more than <math>5 \times 10^6</math> cells</b> ) buffy coat ( <b>no more than <math>5 \times 10^6</math> cells</b> ) * If the sample is less than 200 $\mu$ l, please add 1X PBS to fill up to 200 $\mu$ l.
<b>Controls/Optional Internal Control<sup>#</sup></b>	Add controls/internal control in the extraction procedure if needed for the downstream analysis.
<b>Elution Volume</b>	150 $\mu$ l

### 【Expected Purity and Yield】

DNA was purified from three different human whole blood (in EDTA-K2 collection tube) by using ZiXpress<sup>®</sup> Purification Instrument and Whole Blood DNA Extraction Kit. DNA concentration was measured by NanoDrop<sup>®</sup> 2000 spectrophotometer. The range of DNA yield is 1.4-8.7  $\mu$ g (WBC counts:  $1.8$ - $10.8 \times 10^3$  cells/ml). The DNA yield from whole blood depended on the blood donor and blood cell counts.

Sample Material	Volume/ Amount	DNA Yield	Purity
Whole Blood (WBC: $1.8 \times 10^3$ cells/ml)	200 $\mu$ l	1.4-1.5 $\mu$ g	OD260/OD280 $\geq$ 1.6 OD260/OD230 $\geq$ 1.3
Whole Blood (WBC: $4.2 \times 10^3$ cells/ml)	200 $\mu$ l	3.4-3.6 $\mu$ g	
Whole Blood (WBC: $10.8 \times 10^3$ cells/ml)	200 $\mu$ l	8.3-8.7 $\mu$ g	

Concentration of gDNA from 16 different human whole blood extracted by ZiXpress® Whole Blood DNA Extraction Kit.



### 【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.








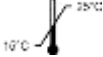




This warranty limits Zinexts Life Science Corporation's liability only to the cost of the product. No warranty is granted for products beyond their listed expiration date. No warranty is applicable unless all product components are stored in accordance with instructions.

### 【Technical Support】

For technical assistance and more information, please visit our website [www.zinexts.com](http://www.zinexts.com), contact our Technical Support or your local distributor.

## 【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

### 【Product List】

Catalog Number	Packaging Specification (Adapted System)
312A021A	Pre-filled Reagents for 96 Tests/Box (2 <sup>nd</sup> generation ZiXpress 32/64)
312A021B	Pre-filled Reagents for 192 Tests/Box (2 <sup>nd</sup> generation ZiXpress 32/64)
312A021C	Non-Pre-filled Reagents for 960 Tests/Box (2 <sup>nd</sup> generation ZiXpress 32/64)

### 【Manufacturer Information】

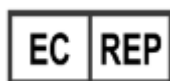
**Manufacturer:** Zinexts Life Science Corp.  
**Address:** 16F., No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221416, Taiwan (R.O.C.)  
**Tel:** +886 2 2246 3579  
**Fax:** +886 2 2243 8570  
**Mail:** [info@zinexts.com](mailto:info@zinexts.com)  
**Product of Origin:** Taiwan (R.O.C.)

### 【Revision History】

Version	Date	Description
3.7	10 Feb. 2025	Add ZiXpress 96S



**Version:** 3.7  
**Rev. Date:** 10.02.2025



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