

ZR Fungal/Bacterial DNA Kit™

Simple, Rapid Isolation of DNA from Tough-To-Lyse Fungi & Bacteria

- Isolate PCR-quality DNA from fungi and bacteria in as little as 10 minutes.
- Efficient processing is ensured with ultra-high density Bashing-Beads™.
- Does not require the use of organic denaturants or lytic enzymes (e.g., Zymolyase).

Input

50-100 mg (wet weight) fungi or bacteria or up to 200 mg tissue. This equates to approximately 10^9 bacterial cells, 10^8 yeast cells and 10^7 mammalian cells.

DNA Purity

High quality DNA is eluted with DNA Elution Buffer making it perfect for PCR. Typical absorbance_{260 nm/280 nm} > 1.8.

Format

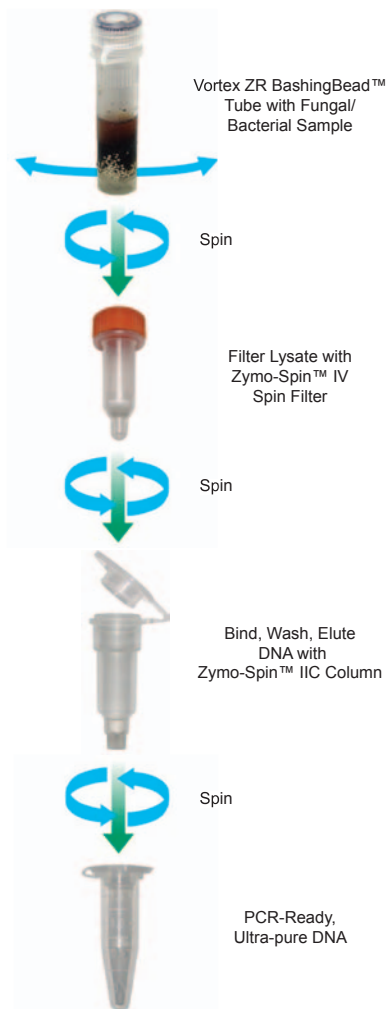
Bead Beating, Spin Column.



The ZR Fungal/Bacterial DNA Kit™ is designed for the simple, rapid isolation of DNA from tough-to-lyse fungi, including *A. fumigatus*, *C. albicans*, *N. crassa*, *S. cerevisiae*, *S. pombe*, as well as from mycelium and Gram (+) and (-) bacteria.

The procedure is easy and can be completed in as little as ten minutes. Fungal and/or bacterial samples are added directly to a ZR BashingBead™ Lysis Tube then are rapidly and efficiently lysed without using organic denaturants or proteases. The DNA is isolated and purified using our Fast-Spin column technology and is ideal for downstream molecular-based applications including PCR, array, etc. A schematic of the ZR Fungal/Bacterial DNA Kit™ procedure is shown below.

Outline showing the ZR Fungal/Bacterial DNA Kit™ procedure.



Comparative Overview

	ZR Fungal/Bacterial DNA	Supplier M	Supplier Q
Processing Time	10-15 minutes	40-50 minutes	> 3 hours
DNA Recovery	High	High	Fair
DNA Integrity	Good	Fair	Fair
Fidelity of PCR	High	Fair	Fair
Use of Proteinases	No	No	Yes



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

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ZR Fungal/Bacterial DNA Kit™

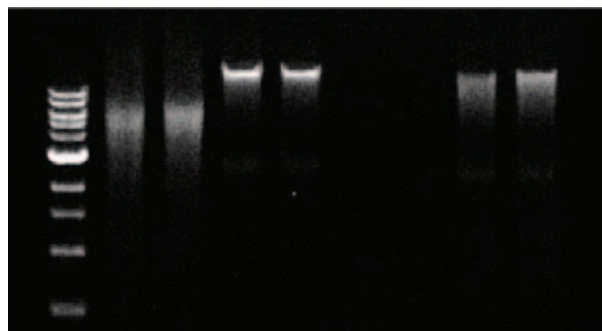
ZR Fungal/Bacterial DNA Kit™ Short Protocol

1. Add sample to a **ZR BashingBead™ Lysis Tube** and process at maximum speed for 5 minutes.
2. Centrifuge the **ZR BashingBead™ Lysis Tube** at 10,000 x g for 1 minute.
3. Transfer up to 400 µl supernatant to a **Zymo-Spin™ IV Spin Filter** (orange top) in a **Collection Tube** and centrifuge at 7,000 rpm for 1 minute.
4. Add 1,200 µl of **Fungal/Bacterial DNA Binding Buffer** to the filtrate in the **Collection Tube** from Step 3.
5. Transfer 800 µl of the mixture from Step 4 to a **Zymo-Spin™ IIC Column** in a **Collection Tube** and centrifuge at 10,000 x g for 1 minute. Discard the flow through from the **Collection Tube** and repeat.
6. Add 200 µl **DNA Pre-Wash Buffer** to the **Zymo-Spin™ IIC Column** in a new **Collection Tube** and centrifuge at 10,000 x g for 1 minute then wash w/ 500 µl **Fungal/Bacterial DNA Wash Buffer**.
7. Transfer the column to a clean 1.5 ml microcentrifuge tube and add 100 µl **DNA Elution Buffer** directly to the column matrix. Centrifuge at 10,000 x g for 30 seconds to elute the DNA.



The (optional) Disruptor Genie® w/ 2.0 ml Tube Holder from Scientific Industries, Inc. Cat. No. S6001-2 from Zymo Research Corp.

	Zymo Research		Supplier M	
1 kb	Yeast Spores	<i>E. coli</i>	Yeast Spores	<i>E. coli</i>



DNA isolated from *Saccharomyces cerevisiae* (spores) and *E. coli* using the **ZR Fungal/Bacterial DNA Kit™** is high quality and structurally intact. Equivalent amounts of yeast and bacteria were processed using the **ZR Fungal/Bacterial DNA Kit™** or the kit from supplier M. Equal volumes of eluted DNA were then analyzed in a 0.8% (w/v) agarose/ethidium bromide gel. The size marker is a 1 kb ladder (Zymo Research).

Ordering Information

Product Description	Catalog No.	Kit Size
ZR Fungal/Bacterial DNA Kit™	D6005	50 Preps.
Disruptor Genie® Scientific Industries Inc w/ 2.0 ml tube holder	S6001-2	1 Unit
TurboMix® Attachment, 2.0 ml (Permanently mounts to most existing Vortex-Genie® 2 and Vortex-Genie® 2T mixers converting them to a Disruptor Genie®).	S6004-2	1 Unit

Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility. Disruptor Genie®, Vortex-Genie® and TurboMix® are trademarks of Scientific Industries, Inc., Bohemia, New York, USA.