

Check the product label for actual catalog number, lot and expiry date.

## SampleIN™ Lysis Set for PCR/qPCR

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
DPL0101	80 lysis reactions	1.6 ml - DPK Lysis Buffer, 5X 0.8 ml - DPK Protease Buffer, 10X	DPK Lysis Buffer, 5X contains all components required for an efficient lysis of mammalian tissue samples.
DPL0105	400 lysis reactions	5 x 1.6 ml - DPK Lysis Buffer, 5X 5 x 0.8 ml - DPK Protease Buffer, 10X	DPK Protease Buffer, 10X contains proteases to eliminate sample proteins.

Storage In the dark at -20°C.

### APPLICATIONS

- Fast crude sample preparation for direct PCR/qPCR
- Template preparation for direct PCR/qPCR from mouse tail or ear, mammalian tissues (including FFPE), hair follicle, buccal swabs, and blood (including EDTA or FTA samples)

### PRODUCT DETAILS

SampleIN™ Lysis Set for PCR/qPCR is a combination of a lysis buffer and protease-containing buffer allowing for a fast lysis of different sample material to release the DNA in a short time.

The quickly lysed samples contain enough DNA for PCR and qPCR/RT-qPCR applications, eliminating the need of tedious template purification. The set is used to prepare templates for direct PCR or qPCR from mouse tail or ear, mammalian tissues, hair follicle, buccal swabs and blood. It can also be used with some plant materials, if these are not considered as very oily, hard or difficult to lyse.

Rapid 15 min DNA extraction using DPK Lysis and Protease Buffers in a single tube generates crude PCR template extract which can be further amplified using inhibitor resistant, robust PCR or qPCR mixes such as ALLin™ HS Red Taq Mastermix, or SampleIN™ qPCR Probe Mixes.

### BENEFITS

- PCR-ready crude samples in 15 minutes
- Single-tube fast and efficient DNA release
- High yield PCR and efficient qPCR without tedious DNA extractions
- No material losses, minimized pipetting and hands on time

### SAMPLE GUIDELINES

Sample (fresh or frozen)	Amount	Extr. vol.
Mouse tail	2 mm or 3-5 mg	100 µl
Mouse ear	2 mm <sup>2</sup> or 3-5 mg	100 µl
Mammalian tissue	5 mg	100 µl
FFPE Tissue	2 mm <sup>2</sup> of 10 µm section	100 µl
Blood (fresh/EDTA)	2 µl	100 µl
Blood Guthrie cards	2 mm <sup>2</sup>	100 µl
Blood FTA/FTA Elute cards	2 mm <sup>2</sup>	100 µl
Hair follicle	2 follicles	100 µl
Buccal swab	1 swab	300 µl
Plant leave	2 mm <sup>2</sup> well crashed	100 µl
Plant seed	1 (2 mm seed crashed or cut or a crashed seed piece of 2 mm <sup>2</sup> )	100 µl

### SAMPLE DNA EXTRACTION PROTOCOL

- Take typical measures to prevent contamination, keep your bench clean, wear gloves, and use sterile tubes.
- Thaw DPK Buffers at room temperature. Mix well before use.
- Prepare a 100 µl extraction reaction in a sterile vial (use 3x larger volumes of all reagents for buccal swab):

Sample amount	As indicated above in SAMPLE GUIDELINES
DPK Lysis Buffer, 5X	20 µl
DPK Protease Buffer, 10X	10 µl
PCR Water (not supplied)	70 µl

- Mix very gently. Place into the thermal block/water bath set like:
 

Lysis	75°C - 5 min. Vortex twice during lysis.
Protease inactivation	95°C - 10 min
- Add 900 µl of PCR Water. Mix carefully.
- Centrifuge 1 min to pellet cell debris. Carefully remove the supernatant into the sterile tube and discard the tube with debris.
- Store the supernatant (lysate) on ice or at +4°C for an immediate use in PCR or qPCR reaction.
- You can store samples at -20°C for several months. But note, that the PCR yield and quality will be the best when used immediately.
- Do not use more than 1 µl of the lysate for each 10 µl of the PCR/qPCR reaction volume. For the most correct results, perform serial dilutions of the lysate 1:10 and 1:100 with nuclease free water, and use well-diluted lysates to minimize inhibitory effects.
- 3 minutes initial PCR denaturation at 98°C helps to prevent inhibitory effects with crude samples.
- Perform PCR or qPCR using inhibitor resistant, robust PCR or qPCR mixes such as ALLin™ HS Red Taq Mastermix, or SampleIN™ qPCR Probe Mixes.
- This Set is not tested with RNA templates and RT-qPCR. For use with RNA, we suggest adding RNase Inhibitor in every step of sample handling.

### DIRECT PCR PROTOCOL EXAMPLE

- Always Include a no-template control and positive control in parallel.
- Thaw and keep PCR reagents on ice. Mix well before use.

✓ Prepare a 50 µl PCR reaction:	
Rev. & For. Primers	0.1-0.4 µM final each (≤ 2 µl of 10 µM)
Template	1-5 µl of lysed (or 1:10 to 1:100 diluted) sample
PCR Water	to 25 µl
<b>ALLin™ HS Red Taq Mastermix, 2X</b>	25 µl
✓ Mix gently. Place into the PCR instrument set like:	
Initial denaturation	1 cycle: 98°C - 3 min
Denaturation	40 cycles: 95°C - 15 sec
Annealing	40 cycles: 55-65°C - 15 sec
Extension	40 cycles: 72°C - 15 sec/kb (90 sec for multiplex)

### Direct qPCR PROTOCOL EXAMPLE

- Always Include a no-template control and positive control in parallel.
- Thaw and keep PCR reagents on ice. Mix well before use.

✓ Prepare a 20 µl PCR reaction:	
Rev. & For. Primers	0.1-0.4 µM final each (≤ 2 µl of 10 µM)
Probe	200 nM final c. (0.4 µl of 10 µM)
Template	1-2 µl of lysed (or 1:10 to 1:100 diluted) sample
PCR Water	to 15 µl
<b>SampleIN™ qPCR Probe Mix, 4X</b>	5 µl
✓ Mix gently. Place into the qPCR instrument set like:	
Initial denaturation	1 cycle: 98°C - 3 min
Denaturation	40-50 cycles: 95°C - 5 sec
Annealing/extension	40-50 cycles: 60-65°C - 20-30 sec

Follow instrument instructions for melting curve analysis.

### IN VITRO RESEARCH USE ONLY

#### ORDERING

T: +49 7250 33 13 401  
F: +49 7250 33 11 413  
[order@highQu.com](mailto:order@highQu.com)  
[www.highQu.com](http://www.highQu.com)

#### SALES

T: +49 7250 33 13 401  
F: +49 7250 33 11 413  
[sales@highQu.com](mailto:sales@highQu.com)

#### TECHNICAL SUPPORT

T: +49 7250 33 13 401  
F: +49 7250 33 11 413  
[tech-support@highQu.com](mailto:tech-support@highQu.com)