

Instructions for Isohelix DNA Isolation kits: DDK-3/DDK-50

Product Details

Isohelix Buccal DNA Isolation Kits have been specifically formulated to produce high DNA yield and purity from buccal swabs. The kits have been fully optimised at Cell Projects for use on buccal cell samples and offer reduced handling times, increased DNA yields and many other important technical benefits for their use in manual, 96-well or other high throughput formats.

Key Benefits

- ✓ Optimised for buccal cells
- ✓ Fast handling times
- ✓ High purity and yield
- ✓ No solvent based chemicals
- ✓ Protocol integrated to swabs
- ✓ Manual or high throughput formats
- ✓ No columns or filtration
- ✓ Less consumables wastage

Kit Contents

Isohelix DDK DNA Isolation Kits			
Catalogue No.	DDK-3	DDK-50	Storage temperature
Number of preps	3	50	
Solution LS (Lysis buffer)	1.5ml	25ml	Room temperature
Solution PK (Proteinase K)	100µl	1ml	-20°C
Solution CT (Capture buffer)	1.5ml	25ml	Room temperature
Solution TE (Re-hydration buffer)	500µl	15ml	Room temperature

Storage

STORE KITS AT CORRECT TEMPERATURE ON ARRIVAL

Isohelix DNA Isolation Kits are shipped at ambient temperature.

Please note that on arrival the kit components should be stored according to the table above.

The kits are stable up to the expiry date if stored as instructed. See box label for expiry date.

Equipment and reagents to be supplied by user

- Water bath or heating block at 60°C
- Pipettes with disposable tips
- Microcentrifuge (with rotor for 2 ml tubes)
- 1.5ml microcentrifuge tubes
- Vortexer

Before Starting

1. Prepare a waterbath at 60°C
2. If a precipitate has formed in solution LS, warm at 60°C for a few minutes
3. Remove the PK solution from the freezer and allow to thaw at room temperature.

Note: If a fine white powder precipitate has formed in the PK, vortex the tube immediately prior to pipetting the PK. The precipitate should not block the pipette tip and will dissolve when added to the LS buffer.

This precipitate if present has no adverse effect on the activity of the Proteinase K.

Technical Assistance

If you have any questions regarding the use of this kit or other Isohelix products please contact us by email at info@isohelix.com or for further information visit the website at www.isohelix.com

Safety and Use of the DDK DNA Isolation kits

The DDK kits are intended for use by qualified professionals trained in potential laboratory hazards and good laboratory practise. If direct information is not available on any of our compounds this should not be interpreted as an indication of product safety.

This kit has been designed solely for research use only

Isohelix is a division of Cell Projects

For swab or DNA isolation queries email: info@isohelix.com www.isohelix.com
Molecular Biology Solutions www.cellprojects.com

DNA Isolation Protocol

Part A – DNA Stabilisation

1. Add 500ul LS solution to the tube containing the buccal swab.
2. Add 20ul PK solution to the tube containing the buccal swab and LS solution. Vortex briefly.

At this point the DNA is stabilised. You may continue with the DNA isolation or store the stabilised swab in a sealed tube at room temperature for at least 3 ½ years.

Part B – DNA Isolation

3. Place the tube containing the swab, LS solution and PK solution in a 60°C water bath for 1 hour. Vortex briefly.
4. Re-set the water bath to 80°C if you are using step 14.
5. Transfer the liquid in the tube (approx. 400ul) into a 1.5ml centrifuge tube using a sterile pipette tip.
6. Optional step to increase yield:
 If using **SK-1 swabs**, tip the swab head and stick into a sterile 1.5ml centrifuge tube so that the swab head is uppermost. Spin the tube briefly and using a sterile pipette tip add the recovered supernatant to the 400ul collected previously.
 If using **SK-2 swabs**, spin the SK-2 tube containing the swab head briefly and using a sterile pipette tip add the recovered supernatant to the 400ul collected previously
7. Add 400ul CT solution to the tube, (**500ul if using the optional step 6**). Vortex briefly.
8. Place the tube in a microcentrifuge (see *tip* below) and spin at approx. 13K rpm for 7 minutes to pellet the DNA.
Note the pellet may not be visible.
Tip: Place the tube with hinge positioned outwards so the liquid can be removed from the opposite side.
9. Remove all the supernatant carefully with a pipette tip taking care not to disturb the DNA pellet.
10. Re-spin the tube briefly and remove any remaining liquid.
Note it is important to remove all of the liquid.
11. Add 150ul TE solution to the tube. This volume may be decreased to as little as 30ul if a higher concentration of DNA is required.
12. Leave for at least 5 minutes at room temperature for the DNA to re-hydrate, longer if a reduced volume of TE has been used. Vortex briefly.
13. Optional step (May improve lower than expected A260/280 and A260/230 ratios.) Spin tube at 13K rpm for 2 minutes to remove any undissolved particulates and remove supernatant to a clean tube.
14. Incubate the tube at 80°C for 5 minutes. Vortex and spin the tube briefly.
Note do not use this step if you require double stranded DNA for example restriction digests.

The DNA sample is now ready for use in downstream applications such as amplification.

Store the DNA sample at 4°C for short term storage or -20°C for long term storage.

The expected yield from a buccal swab is 2 to 10µg DNA (10 to 70ng/µl).

Our **DQC-50 DNA Quality Check Kit** is designed specifically to confirm presence of and to test both the quality and quantity of your human DNA by a quick PCR test before you start downstream testing.

Other Cell Projects Products

Isohelix DNA Buccal Swabs.

➤ High yields, blood alternative, reproducible, easy to use, different formats for various extraction methodologies.

Isohelix DNA Silica Gel Capsules

➤ For use with SK-1 swab kits, air-dries swab in tube giving extended storage times without loss of stability.

Isohelix DNA Isolation and Handling kits

➤ DNA stabilising kits for the stable storage of DNA at Room Temperature for long periods: DSK-3/50

➤ DNA quality check by PCR to confirm quality of DNA prior onward experimentation: DQC-50

➤ DNA Release kits – quick and easy kit for PCR-ready DNA from buccal swabs in under 20 minutes: BEK-50

➤ Isohelix Spin+Collect™ sample recovery devices to increase yields from swabs and other materials: SC/ST-100

PCR Products - A range of high quality PCR plastic for 96 well format plates and cap strips

Electroporation - The HiMaX electroporation cuvettes and buffers maximise molecular electroporation and electrofusion efficiencies for Bacteria, Yeast, Insect, Plant and Mammalian cells.

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