Protocol DNA Purification

Plant

with ^{4}ward-NA® puriSorb®

- ^{4}ward-NA® puriPlate96 -

Cat. No. 4w01.P01

Cat. No. 4w01.P04

Cat. No. 4w01.P10

Version 1.3

For research use only

Principle

4ward-NA® DNA purification kits (Plant) are designed for extraction and purification of DNA from a wide range of plant species. **4ward-NA® puriSorb® technology** allows the purification **in one single step** after lysis. Impurities are bound and the purified DNA is recovered in the eluate. The excellent purity of the DNA allows immediate use in all common downstream applications (e.g. PCR).

Kit contents

The kit contains all necessary reagents for lysis and DNA purification.

Component	Art. No. 4w01.P01	Art. No. 4w01.P04	Art. No. 4w01.P10*
Activation Solution (ActivS)	40 mL	155 mL	400 mL
Buffer 4wA (F)	31 mL	125 mL	310 mL
Buffer 4wB (H)	21 mL	82 mL	210 mL
Protease	2.2 mL	9 mL	22 mL
SDS	1.2 mL	4.5 mL	12 mL
RNase A	on request	on request	on request
DTT (1,4-Dithio-DL-threitol)	on request	on request	on request
4ward-NA® puriPlate96	1	4	10
Deep well plate (1.2 mL)	3	12	30
Sealing tapes (plastic)	2	8	20
Storage sealing tapes (alu)	2	8	20

*other kit sizes on request

Storage Conditions

During shipment all kit components are stable at room temperature. After arrival, store chemicals at **+2 °C to +8 °C**. All other components can be stored at room temperature. Please see expiration date of the kit.

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Safety Information

Protease	Danger	H315, H318, H334, H335 P261, P280, P342+P311, P305+P351+P338
DTT	Warning	H315, H319 P280, P305+P351+P338, P321, P362, P332+P313, P337+P313
SDS	Danger	H315, H318 P305+P351+P338

Hazard Statements

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Precautionary Statements

P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P362	Take off contaminated clothing and wash before reuse.
P332+P313	If skin irritation occurs: Get medical advice/ attention.
P337+P313	If eye irritation persists: Get medical advice/ attention.

When working with chemicals, always wear a suitable lab coat, disposable gloves and protective goggles. For more information, please contact us for the appropriate material safety data sheets (MSDS).

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Before starting

Activation of puriSorb® in 4ward-NA® puriPlate96

A1	Add **350 µL Activation Solution** onto each well of a **4ward-NA® puriPlate96**. Incubate for at least 5 min at room temperature. Centrifuge at max. **350 × g** for **1 min** or apply vacuum for **1 min** to remove excess Activation Solution. Discard the deep well plate.
A2	The activated **4ward-NA® puriPlate96** is ready for purification.

- **Preheat an incubator to 60 °C.**

Protocol

Lysis of plant tissue for DNA purification

1. Transfer **5 pieces of leaf tissue** (e.g. 5 × 5 mm) into each well of a deep well plate (1.2 mL).
2. Add **280 µL Buffer 4wA (F)** and **20 µL Protease**.
3. Seal the plate with storage sealing tapes and incubate **(60 °C, 30 min up to overnight)**.

Lysis of homogenized plant tissue for DNA purification

1. Homogenize/grind up to **50 mg** of **plant tissue** with **185 µL Buffer 4wB (H)** (optional: add **3 µL DTT** / **12 µL RNase A**).
2. Add **70 µL Buffer 4wA (F)**, **20 µL Protease** and **10 µL SDS**.
3. Seal the plate with storage sealing tapes and incubate **(60 °C, 30 min up to overnight)**, if necessary, centrifuge for a clear supernatant for DNA purification.

Lysis of plant seeds for DNA purification

1. Homogenize/grind up to **30 mg** of **plant seeds** or use up to 30 mg plant seed meal.
2. Add **280 µL Buffer 4wA (F)** and **20 µL Protease** (optional: add **3 µL DTT**).
3. Close the plate using storage sealing tapes and incubate **(60 °C, 30 min up to overnight)**.

Purification of DNA using 4ward-NA® puriSorb® (ONE-STEP)

P1	Transfer between **60 µL** and **120 µL** of the lysate into an activated well of the **4ward-NA® puriPlate96**. Incubate for at least **3 min** and centrifuge at max. **700 × g** for **1 min**.
	The eluate contains the ready-to-use purified DNA.

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Troubleshooting, FAQ and Special Applications

Please contact us for further information about our innovative DNA Purification System using the **⁴ward-NA® puriSorb® technology.**

Contact Information

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Ordering Information and Prices

For ordering information and prices please contact: sales@4ward-na.com.

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