



Clean FFPE

DNA & RNA Kit

A background image showing several white microcentrifuge tubes with blue caps, arranged in a grid. The tubes are slightly out of focus, with some showing handwritten labels like "L-580/21" and "L-560/21". The image is overlaid with a blue circular graphic and a pattern of small blue dots.

DNA and RNA
extraction from
precious FFPE tissue

The non-toxic way of nucleic acid extraction from FFPE

Over the years, a huge number of formalin-fixed paraffin-embedded (FFPE) tissue samples from patients with a high variety of conditions has been collected in hospital and institute databanks. Valuable information about DNA and RNA in relation to the diseases is stored in here, but a proper nucleic acid extraction is required for these precious FFPE samples. We developed the Clean FFPE DNA & RNA Kit for this purpose.

Benefits:



Easy automation



DNA and RNA from the same sample



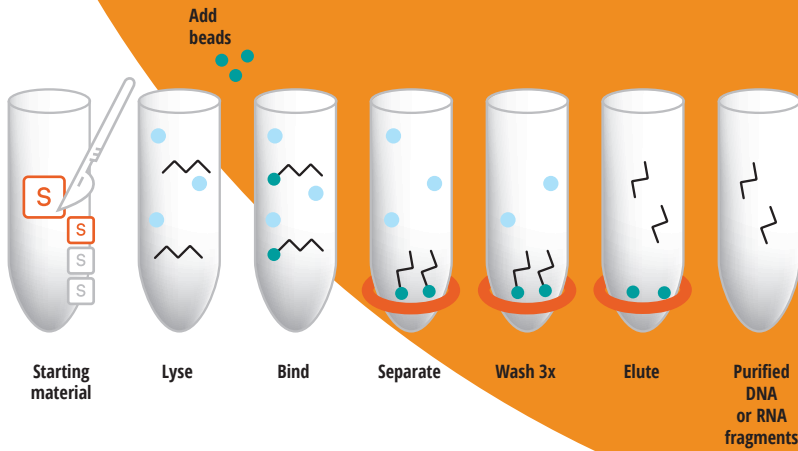
Suitable for PCR/NGS

The Clean FFPE DNA & RNA Kit has a non-toxic deparaffinization protocol that avoids xylene. Our buffer system deparaffinizes the FFPE samples, reverses cross-linking caused by the formalin, and digests the tissue sample. Both DNA and RNA can be extracted from the same FFPE sample, and the material is directly suitable for a variety of downstream applications.

Application

After completing the extraction protocol, the extracted DNA or RNA samples can be used for a range of downstream applications, such as SNP analysis, Next Generation Sequencing, genotyping and (q)RT-PCR. DNA and RNA extracted from FFPE samples is valuable for oncology, hematology, immunology, and other fields of research.

Workflow



We lyse the FFPE samples with our specially formulated lysis buffer and the DNA selectively binds to our magnetic beads. The supernatant can then be removed and, if applicable, processed separately for RNA extraction. A magnetic plate separates the magnetic beads with the DNA from the solution. By performing a few rapid wash steps, trace contaminants are removed. The purified DNA and/or RNA is then eluted from the magnetic beads using an elution buffer or molecular biology grade water.

Proof of principle

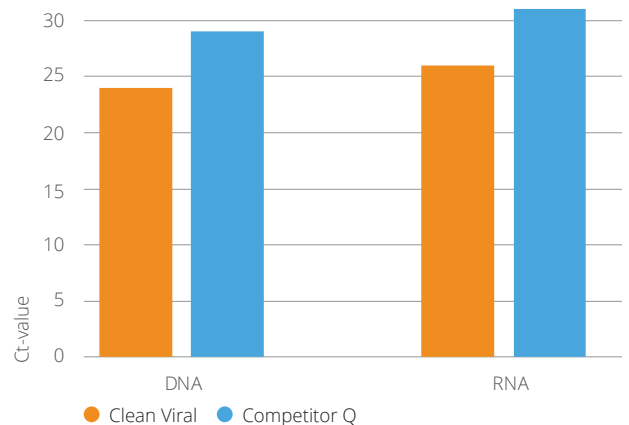
To determine the yield and purity of the DNA and RNA after using the Clean FFPE DNA & RNA Kit, we extracted DNA and RNA from an FFPE sample with our kit. We also extracted DNA and RNA from the same sample with Competitor Q's silica spin column to compare the performance (Table 1). Competitor Q's high 260/280 ratio's for the extracted DNA suggest possible RNA contamination within the extracted DNA samples. The Clean FFPE DNA & RNA Kit successfully separated the DNA and RNA from the same sample into two eluates.

TABLE 1.
Comparison of DNA and RNA extracted from the same FFPE sample with CleanNA's kit and Competitor Q's silica spin column.

	Isolation kit used	Concentration (ng/μL)	260/280	260/230
DNA	CleanNA	54.7	1.85	1.50
		53.6	1.81	1.45
	Competitor Q	270.3	2.06	1.03
		272.6	2.10	0.99
RNA	CleanNA	114.6	1.90	1.02
		113.7	1.89	1.26
	Competitor Q	50.6	1.44	0.35
		51.9	1.40	0.45

Figure 1 shows the qPCR results of DNA and RNA extracted with CleanNA's kit and Competitor Q's silica spin column. The experiment was performed in triplicate. RNA and DNA specific primers were used and for the RNA qPCR protocol, a reverse transcriptase was included. Our Clean FFPE DNA & RNA Kit shows lower Ct-values for both DNA and RNA.

FIGURE 1.
qPCR results of DNA and RNA extracted from the same FFPE sample with CleanNA's kit and Competitor Q's silica spin column.



About CleanNA

Isolation of nucleic acids often comes with challenges and CleanNA thinks that no researcher should have to face them alone. At our facilities in the Netherlands, we produce nucleic acid isolation kits and reagents. We offer complete solutions with magnetic beads that meet researchers' needs while significantly reducing their hands-on time

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Ready to order?

Order via your local distributor or contact us via our details below.

Order info

Product	Preps	Part Number
Clean FFPE DNA & RNA Kit	96	CFFPE-DR0096
Clean FFPE DNA & RNA Kit	384 (4 x 96)	CFFPE-DR0384

Product	Pack size	Part Number
Clean Magnet Plate 96-Well	1 Plate	CMAG-96-RN50

The Clean FFPE DNA & RNA Kit is distributed by:



Check our website for all our distributors: