Clean NA

Clean Blood & Tissue DNA Kit

Dx CE-IVD version also available

Fast and Reproducible Genomic DNA extraction

Reliable genomic DNA extraction

Genomic DNA analysis is the foundation of modern molecular diagnostics. Information from our genetic blueprint can provide answers to the cause and prevention of genetic diseases and cancer, but also offer insight into suitable treatment options. With the rise of personalised medicine, genomic DNA will be an important asset to track medicine response in a patient. We offer our Clean Blood & Tissue DNA Kit for the essential first step: extracting genomic DNA from blood or tissue.

The magnetic bead-based kit extracts genomic DNA from blood, tissue or buffy coat in four simple steps: lyse, bind, wash, and elute. Two different lysis buffers ensure optimal extraction from tissue, whereas blood and buffy coat only require one lysis step. With the binding solution and magnetic beads combined in one bottle, very efficient and robust workflows ensue.

Automation of the protocol is straightforward on our CleanXtract 96, and most other magnetic bead handlers or liquid handling devices.

Both diagnostic and research workflows can benefit from utilizing our Clean Blood & Tissue DNA Kit, since we offer a CE-IVD certified (Dx) as well as a Research Use Only version.

Benefits:

- **Easy automation**
- **Genomic DNA of high yield and purity**
- **CE-IVD and RUO available**
- **For downstream PCR/NGS**

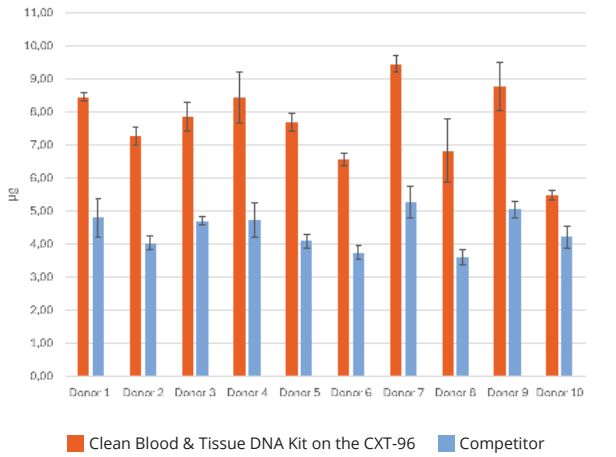
Application

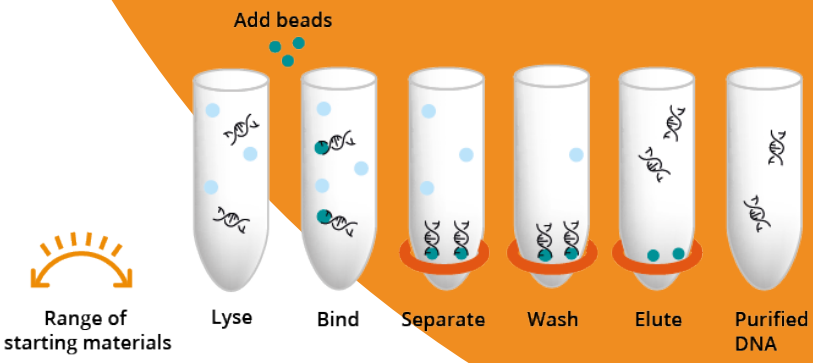
The applications of the Clean Blood & Tissue DNA Kit are broad; it can be used in oncology, genetics, and personalised medicine. Extracted DNA is free of inhibitors and is therefore suitable for all downstream applications, and the CE-IVD version can be applied with high confidence in molecular diagnostic workflows.

Proof of principle

To demonstrate the high DNA yield obtained from blood using the Clean Blood & Tissue DNA Kit Dx, genomic DNA was extracted on the CleanXtract 96 platform from 200 µL of human whole blood collected in EDTA tubes. Samples from 10 different donors were processed, with each donor extracted in triplicate. The same extractions were also performed manually using a kit from a Competitor. Higher DNA yields were obtained using the Clean Blood & Tissue DNA Kit Dx compared to the competitor kit.

FIGURE 1. DNA yield extracted from 10 blood samples of 200 µL from different donors, performed with the Clean Blood & Tissue DNA Kit versus a Competitor kit.



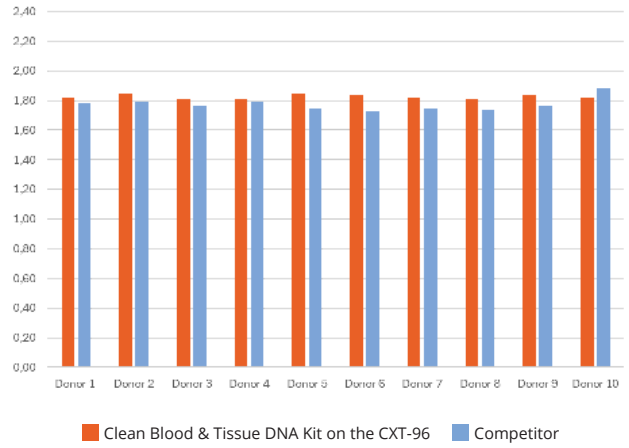


Workflow

Samples are lysed using one of our specially formulated lysis buffers, which are optimized for the various types of starting material. Magnetic beads are added and DNA binds to them, after which the beads with DNA are separated from the lysate using a magnetic separation device. Rapid wash steps then ensure trace contaminants are removed, leaving the purified DNA to be eluted from the magnetic beads.

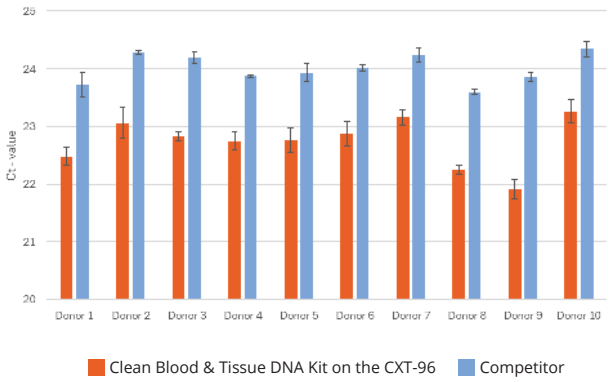
DNA purity was also analysed by measuring the OD values at 260 and 280. Figure 2 shows that the 260/280 ratio of the DNA extracted with CleanNA's kit are all higher than 1,80, indicating the DNA is free of proteins. Yield and OD values were measured on the DeNovix DS-11 instrument.

FIGURE 2. OD 260/280 of DNA extracted from 10 blood samples of 200 µL from different donors, performed with the Clean Blood & Tissue DNA Kit versus a Competitor kit.



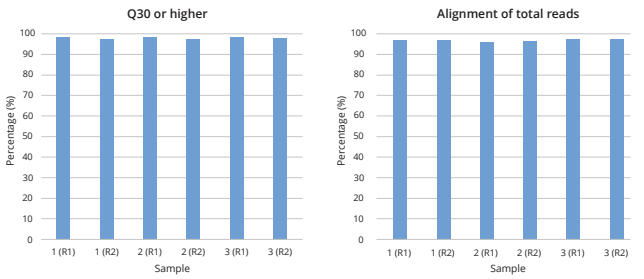
Additionally, a qPCR experiment was performed on the extracted DNA samples. In accordance with the yield measurements, the lower Ct values of the DNA extracted with the Clean Blood & Tissue DNA Kit Dx demonstrate that more target DNA is extracted compared to the competitor kit.

FIGURE 3. Albumin qPCR reaction results of DNA extracted from 10 blood samples of 200 µL from different donors, performed with the Clean Blood & Tissue DNA Kit versus a Competitor kit.



To demonstrate that DNA extracted with the Clean Blood & Tissue DNA Kit is suitable for NGS applications, DNA extracted from whole blood samples of three different donors was used for NGS library preparation. Sequencing was performed on a NovaSeqX platform. As shown in Figure 4, most sequenced bases achieved a quality score above Q30 and high alignment rates were obtained. These results indicate that the extracted DNA is of high quality and fully compatible with reliable downstream NGS workflows.

FIGURE 4. Results after sequencing DNA extracted with the Clean Blood & Tissue DNA Kit.



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

Order info

Product	Preps	Part Number
Clean Blood & Tissue DNA Kit	16	CBT-D0016
Clean Blood & Tissue DNA Kit	96	CBT-D0096
Clean Blood & Tissue DNA Kit	384	CBT-D0384
Clean Blood & Tissue DNA Kit Dx	96	CBTDx-D0096
Clean Blood & Tissue DNA Kit Dx	384	CBTDx-D0384

Product	Pack size	Part Number
CleanXtract 96	1 System	CXT-I096
Clean Magnet Plate 96-Well	1 Plate	CMAG-96-RN50

Clean Blood & Tissue DNA Kit is distributed by:

About CleanNA

CleanNA advances human health with reliable nucleic acid isolation solutions for life science and healthcare labs. Our portfolio includes research and CE-IVD diagnostic products. Our magnetic bead-based reagents are specifically designed to be used in automated laboratory workflows.

CERTIFIED ISO 13485

CERTIFIED ISO 9001

Our quality management system is certified to EN ISO 13485 and EN ISO 9001 by Bureau Veritas

Contact

CleanNA | Coenecoop 75 | 2741 PH Waddinxveen | The Netherlands
+31 (0) 182 22 33 50 | info@cleanna.com | www.cleanna.com