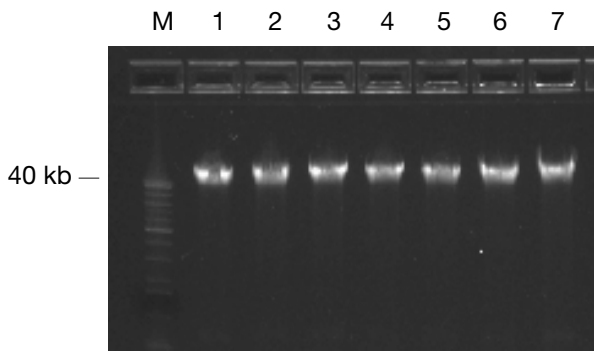


**Figure 6—Cross-contamination-free gDNA purification.** The iPrep™ PureLink™ gDNA Blood Kit was used on the iPrep™ Purification Instrument with a series of positive (350 µl blood) and negative (350 µl water) samples. After gDNA extraction, the DNA yield was measured using the Applied BioSystems Quantifiler® Kit. No DNA was detected in any of the negative samples, indicating an absence of cross-contamination. This sample amplification plot for one of the instrument runs shows clear DNA amplification from the positive (blood) but no amplification for the negative (water) samples.



**Figure 7—gDNA from cultured cells.** gDNA was purified from  $1 \times 10^6$  HEK 293 cells using the iPrep™ PureLink™ gDNA Blood Kit on the iPrep™ Purification Instrument. The samples were electrophoresed on an E-Gel® 1.2% general purpose agarose gel. Lane M is a 1 Kb DNA Extension Ladder; lanes 1–7 are separate extractions from two instrument runs. All samples show extraction of an intact band of greater than 40 kb in size.

# Superior gDNA isolation

iPrep™ PureLink™ kit for whole-blood samples

## Ordering information

Product	Quantity	Cat. no.
iPrep™ PureLink™ gDNA Blood Kit	52 preps	IS-10005
<b>Related products</b>		
iPrep™ Purification Instrument	1 instrument	IS-10000
iPrep™ Forensic Card (includes buccal protocol)	1 card	IS-10011
iPrep™ PureLink™ gDNA Blood Card	1 card	IS-10012
iPrep™ gDNA Tissue Card	1 card	IS-10013
iPrep™ ChargeSwitch® Forensic Kit	52 preps	IS-10002
iPrep™ ChargeSwitch® Buccal Cell Kit	52 preps	IS-10003
iPrep™ ChargeSwitch® gDNA Tissue Kit	52 preps	IS-10004





# High-quality gDNA from fresh or frozen whole blood

## iPrep™ PureLink™ gDNA Blood Kit

- High yields of gDNA from up to 350 µl blood
- Clean gDNA with high  $A_{260}/A_{280}$  and  $A_{260}/A_{230}$  ratios
- Superior performance in sensitive downstream applications

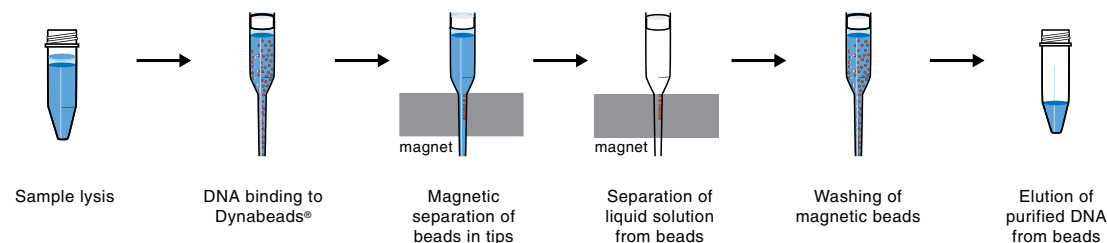
The iPrep™ PureLink™ gDNA Blood Kit allows rapid and efficient purification of DNA from whole-blood samples (Figure 1). Designed specifically for use with the iPrep™ Purification Instrument using the Dynabeads® magnetic separation technology, this kit yields sufficient DNA for clinical studies or for multiple PCR-based standardized testing assays. With  $A_{260}/A_{280}$  ratios of  $\geq 1.8$ , the resulting DNA is highly pure (Figure 2), ideal for use in sensitive multiplex assays (Table 2) or for long-term storage. This kit is optimized to isolate highly pure DNA from 150 µl to 350 µl of fresh or frozen blood in less than 30 minutes (Figure 3). It is highly tolerant of anticoagulants such as citrate and EDTA, and yields high molecular weight DNA (Figure 4). The gDNA is highly reproducible (Figure 5) and there is no cross-contamination between samples (Figure 6). Furthermore, the kit can also be used with cultured cells (Figure 7). Table 1 summarizes the performance of the iPrep™ PureLink™ gDNA Blood Kit.

The iPrep™ PureLink™ gDNA Blood Kit provides all reagents (supplied in prefilled cartridges), tubes, and tips needed to isolate DNA from blood samples. All you need to do is add the cartridges, tips, and your sample tubes to the instrument, select your preferred elution volume, and come back 30 minutes later to collect your pure gDNA in individual screw-cap elution tubes.

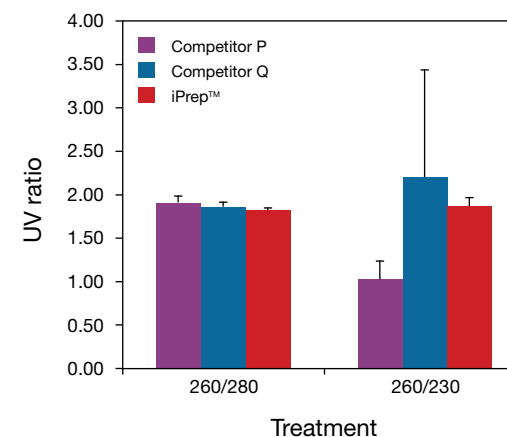
**Table 1—Yield and purity of DNA purified using the iPrep™ PureLink™ gDNA Blood Kit.**

Sample (treatment)	DNA yield (range)	Purity, $A_{260}/A_{280}$ (range)	Purity, $A_{260}/A_{230}$ (range)
Fresh blood (EDTA)	6.0 µg (5.2–7.5)	1.81 (1.80–1.83)	1.85 (1.75–1.91)
Frozen blood (EDTA)	10.0 µg (7.7–13.0)	1.82 (1.78–1.88)	1.83 (1.72–1.91)
Frozen blood (citrate)	8.7 µg (6.7–12.1)	1.83 (1.77–1.89)	1.91 (1.75–2.05)

Yield and purity are given as mean values, with the range of values in parentheses. DNA was purified using the iPrep™ PureLink™ gDNA Blood Kit and the iPrep™ Purification Instrument. DNA was eluted in 200 µl elution buffer; yield was determined using the Quant-iT™ PicoGreen® dsDNA Assay. The UV absorbance ratios were measured using a NanoDrop® ND-1000 spectrophotometer.



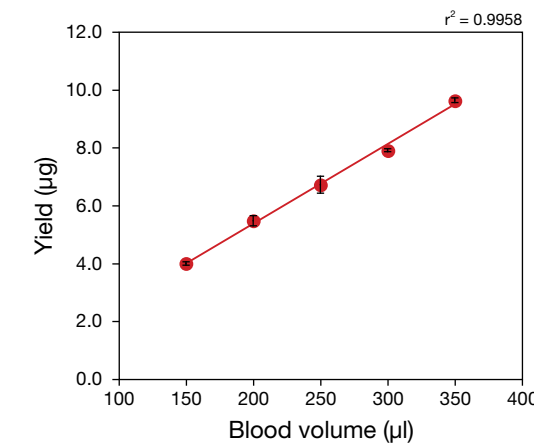
**Figure 1—Purifying gDNA using the iPrep™ PureLink™ gDNA Blood Kit.** The PureLink™ purification procedure enables scalable purification of genomic DNA from blood samples.



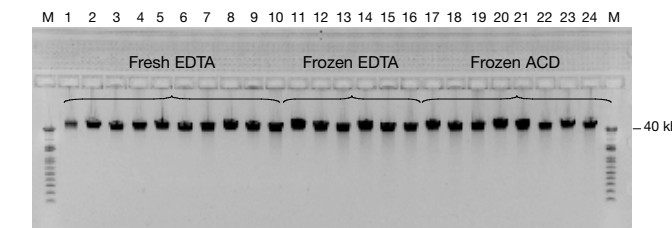
**Figure 2—Purity comparison of gDNA obtained by automated extraction.** DNA was purified from 350 µl of whole blood (n = 15, mixed fresh and frozen samples with both EDTA and ACD anticoagulant) using the the iPrep™ PureLink™ gDNA Blood Kit on the iPrep™ Purification Instrument and also using two competing instruments and kits. UV absorbance ratios were measured using a NanoDrop ND-1000 spectrophotometer. All  $A_{260}/A_{280}$  ratios were comparable and within the desired range; however, only the iPrep™ system provided  $A_{260}/A_{230}$  ratios that were consistently above 1.8 from different blood samples.

**Table 2—Superior performance in complex downstream assays.** DNA was purified from 350 µl of whole blood (n = 5) using the iPrep™ PureLink™ gDNA Blood Kit on the iPrep™ Purification Instrument or two competing instruments and kits. The DNA was used in a multiplex PCR reaction with subsequent hybridization of 100 different probes. The data indicate the number of probes that failed to hybridize for each sample; iPrep™ purified samples had the smallest number of probe dropouts.

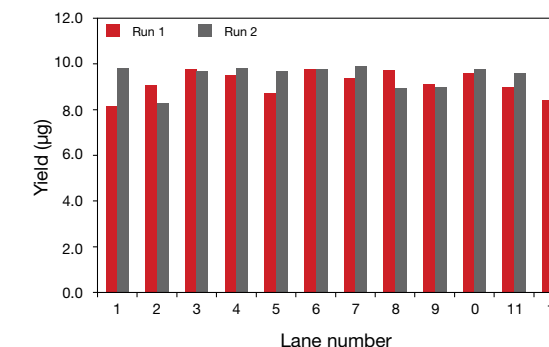
Instrument	Blood sample	# Probe dropouts
Competitor M	1	2
	2	0
	3	0
	4	0
	5	7
Competitor P	1	2
	2	1
	3	0
	4	0
	5	1
iPrep™ system	1	1
	2	0
	3	0
	4	0
	5	0



**Figure 3—Linear DNA extraction achieved with the iPrep™ system.** DNA was purified from 150 µl, 200 µl, 250 µl, 300 µl, and 350 µl of a single whole-blood sample using the iPrep™ PureLink™ gDNA Blood Kit and the iPrep™ Purification Instrument. DNA was eluted in 200 µl elution buffer; yield was determined using the Quant-iT™ PicoGreen® dsDNA Assay. There is a linear correlation ( $r^2 = 0.99$ ) between the volume of blood sample and the yield of purified DNA.



**Figure 4—Integrity of DNA isolated using the iPrep™ system.** DNA purified from 350 µl of whole blood using the iPrep™ PureLink™ gDNA Blood Kit on the iPrep™ Purification Instrument was electrophoresed on an E-Gel® 48 1% agarose gel. Lane M is a 1 Kb DNA Extension Ladder; lanes 1–10 are individual fresh EDTA blood samples, lanes 11–16 are individual frozen EDTA samples, and lanes 17–24 are frozen ACD blood samples. All samples form single intact bands of greater than 40 kb.



**Figure 5—Highly reproducible extraction of gDNA from blood.** Identical 350 µl blood samples were processed on 12 lanes over 2 separate instrument runs (total of 24 samples processed). The coefficients of variation (CV) were 5.9% (run 1) and 5.2% (run 2); the combined CV for 2 runs with the same sample was 5.7%. This demonstrates highly reproducible chemistry and liquid handling.