

cfDNA KIT BIABooster CE PACK

The cfDNA kit is intended to determine the size profile of double stranded DNA **directly from plasma samples** ⁽¹⁾ in the **100 to 1500 bp range** with the BIABooster-CE system

The kit is designed for 50 samples and associated standards

KIT CONTENT

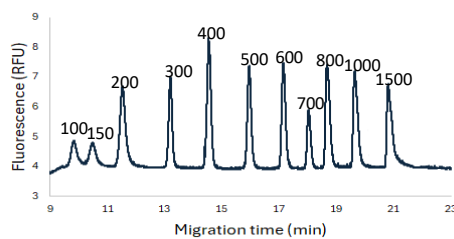


cfDNA Kit (ref : 16-BB-cfDNA)

- Lysis buffer, 0.5 mL
- Proteinase K, 0.65 mL
- RNase 1U/μL, 65 μL
- Capillary coating solution, 30 mL
- Running buffer A, 40 mL
- Running buffer B, 30 mL
- Capillary conditioning solution, 10 mL
- Capillary washing solution, 30 mL
- Fluorescent dye, 10 tubes of 25 μL
- DNA ladder, 3 tubes of 55 μL
- 50 micro-spin filters 0.45 μm
- 65 glass inserts

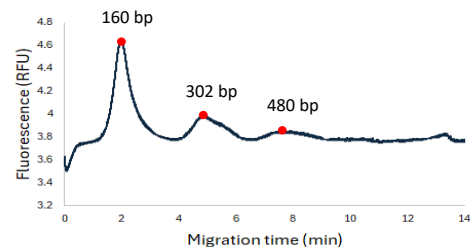
DNA SEPARATION

cfDNA within human plasma is first released from vesicles and histones by proteinase K digestion and detergent. It is then analysed using the BIABooster system. A reference ladder is analysed every 5 samples to convert the fluorescence trace into a profile giving mass concentration according to DNA size.



Standard ladder used in the cfDNA kit

The ladder is composed of 11 bands from 100 bp to 1500 bp.
The total concentration is 32 pg/μL



Typical cfDNA size profile of a healthy donor directly measured from a plasma sample

SPECIFICATIONS

| | |
|-------------------------------------|--|
| Sample type | Plasma samples |
| Size range | 0.1 – 1.5 kb |
| LOD, standard method ⁽²⁾ | 50 pg/mL at 100 bp and 5 pg/mL at 1 kb |
| Sample volume | 10 μL (1 μL injected) |
| Sample salt concentration | up to 130 mM |
| Sizing Accuracy | +/- 3% |
| Sizing Reproducibility | < 3% CV |
| Quantification Accuracy | +/- 20% |
| Quantification Precision | < 20% CV |
| Dynamic range ⁽³⁾ | 800 |

(1) 100μL of plasma is recommended for homogeneous pre-treatment of the sample. 10μL is placed in the injection vial and 1μL of the sample is injected into the BIABooster capillary device.

(2) Limit of Detection: the concentration for a single fragment which gives a signal-to-noise ratio of 3 (peak height). For smears, the LOD is usually 20-50 times higher.

(3) Dynamic Range: ratio between the highest and the lowest concentrations giving a quantifiable result..