Your NGS libraries ready in 1-2-3

That's all it takes

Westburg NGS DNA Library Prep Kit

- NGS library prep in <2 hours
- Single-tube: easy to automate
- Unbiased enzymatic fragmentation
- PCR-free for >100 ng DNA input

Westburg

The Westburg NGS DNA Library Prep Kit replaces mechanical with enzymatic fragmentation, while maintaining the low sequence bias typical of shearing. Both fragmentation and library prep are carried out in a single tube, allowing automation of the entire workflow.

The procedure has less cleanup steps, saving cost and maximizing library yield. The manufacturing process of the reagents ensures exceptional lot-to-lot consistency and perfect reproducibility within a validated workflow.

If your DNA samples are already fragmented, such as cfDNA from liquid biopsies, choose the NoFrag format. It does not contain the fragmentation module, so you can immediately proceed with the library preparation using the same chemistry for various sample types.

Fast, automatable workflow

1	**Fragmentation End repair A-tailing**	52 min.
↓		
2	**Adaptor ligation**	28 min.
↓		
3	**Bead cleanup**	20 min.

Total prep time 1hr 40 min.

Optional ↓

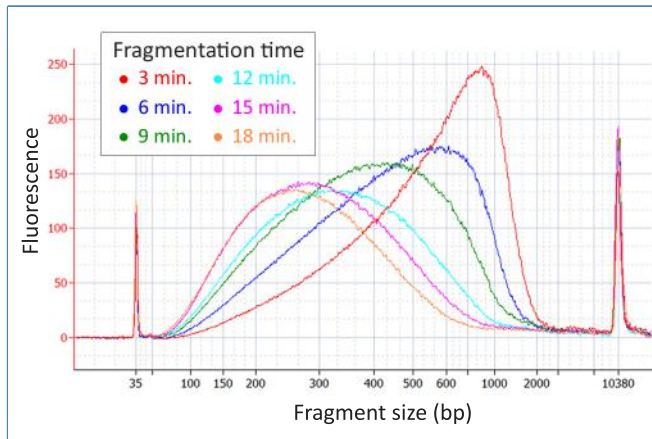|	
PCR + cleanup	50 min.

Benefits of Westburg NGS Library Prep

- Fully automatable single-tube library prep
- Unbiased enzymatic fragmentation
- Illumina-ready library in <2 hours
- One-step fragmentation, repair & tailing
- Uniform coverage across the genome
- High library yield and complexity
- No PCR needed for DNA samples of >100 ng
- Works with many sample types, incl. cfDNA

Comparison of fragmentation methods

| Fragmentation method	Enzymatic (Westburg)	Enzymatic (Kapa)	Mechanical (Covaris)	Transposon (Nextera)
Low sequence bias	✓	✓	✓	✗
Fast (< 2 hours)	✓	✓	✗	✓
Single-tube: automatable	✓	✓	✗	✓
Just 3 steps	✓	✗	✗	✗
PCR-free >100 ng DNA	✓	✓	✓	✗

Adjustable fragment size

Library fragment sizes can easily be adjusted by choosing the appropriate fragmentation reaction time. Data were generated using 1 μg DNA input.
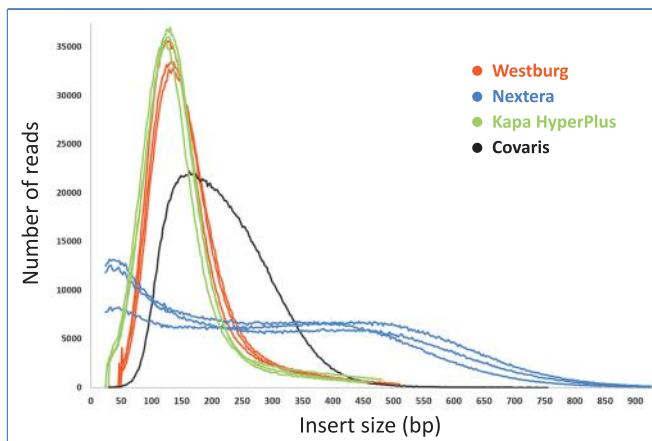

Uniform insert size

Insert size distribution is highly uniform and reproducible, similar to mechanical shearing. Sample input was 10 ng (Covaris, Westburg) or 1 ng (Nextera) yeast genomic DNA
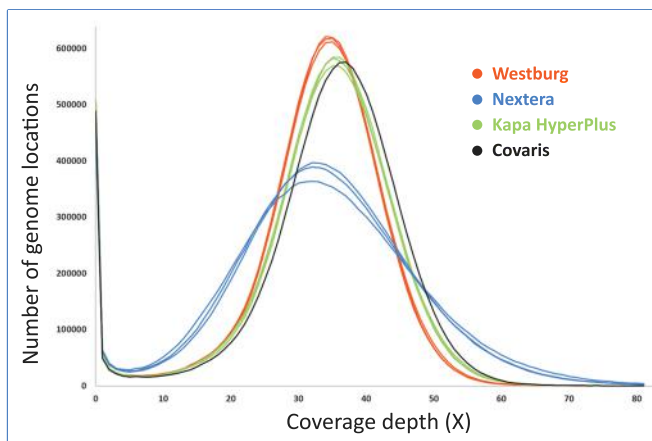
Uniform coverage

Results obtained with the Westburg NGS Library Prep show a consistent and uniform coverage and a high fraction of the genome covered at 30-40x depth. Sample input was 10ng (Covaris, Westburg) or 1ng (Nextera) yeast genomic DNA
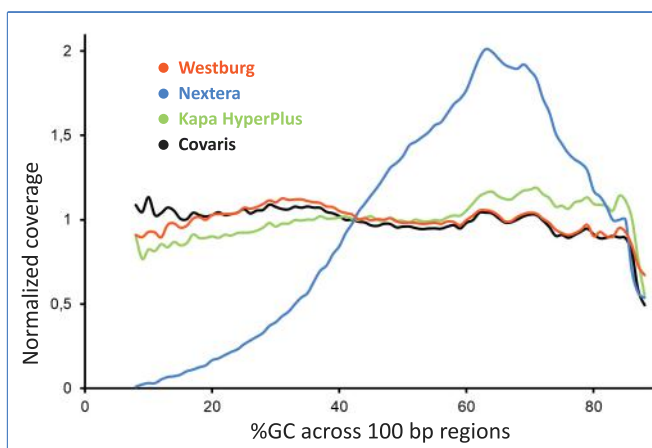
Low GC bias

Westburg enzymatic fragmentation technology has a very low sequence bias across a wide GC% range, almost identical to mechanical shearing. Sample input was 100ng of a mixture of bacterial DNAs covering a wide GC-content range.

Applications

- **Whole Genome Sequencing**
- **Whole Exome Sequencing / Hyb-Capture**
- **PCR-free Sequencing**
- **Fragmented samples (FFPE, cfDNA)**

Ordering information

Cat. no.	Description	Size
WB 9024	Westburg NGS DNA Library Prep Kit	24 reactions
WB 9096	Westburg NGS DNA Library Prep Kit	96 reactions
WB 9224	Westburg NGS NoFrag Library Prep Kit	24 reactions
WB 9296	Westburg NGS NoFrag Library Prep Kit	96 reactions
WB 9100	Westburg NGS Library Amplification Mix	100 reactions

Westburg

+31 33 495 0094
scientific.support@westburg.eu
info@westburg.eu
www.westburg.eu