# MAGICPREP® NGS SYSTEM.

Library preparation that just works.







# WHAT IS MAGICPREP NGS?

Next-generation sequencing (NGS) is an important tool in advancing biological research, public health surveillance and personalized medicine. The process of preparing a sample for sequencing, however, requires expertise and is burdensome. Automation can reduce the burden of library preparation but cost, automation expertise, sample throughput and space limitations have limited the adoption of automated NGS library construction in many laboratories. Tecan's MagicPrep NGS is a complete automation solution for NGS library preparation designed to specifically address these limitations. Combining novel and proven technologies the MagicPrep NGS system offers consistent, reproducible results while minimizing the possibility of user errors. MagicPrep NGS performs the burdensome process of library preparation while you focus on your next experiment.



### **Streamline laboratory operation**

- Plug-and-play solution for easy implementation
- Built-in pre-optimized scripts
- No routine maintenance required

#### Accelerate productivity with automation

- Fully walkaway workflows with 10 min run setup time for eight samples
- Cartridge-based reagents reduce hands-on time
- Kit includes everything need to run MagicPrep

## **Reliable library preparation**

- Proven hardware for robust operation
- Minimize errors with cartridge-based reagents
- Dependable Tecan reagents\* for robust performance

#### Capitalize on laboratory space

- Small footprint with minimal space requirements
- Fully integrated with no external equipment
- Self-contained with no internet connection required

<sup>\*</sup>Tecan reagents leverage NuGEN\* Technology chemistry. NuGEN Technologies was acquired by Tecan in 2018.

## STREAMLINE YOUR LABORATORY OPERATION.

MagicPrep NGS combines automation, software, scripts, reagents and consumables into a seamless workflow to generate libraries for Illumina sequencing platforms. The MagicPrep NGS kits provide all the reagents and consumables necessary for each run. The dedicated reagents and consumables enable pre-optimized workflows eliminating the need for scripting, and optimization while simplifying the run setup.

#### No installation. No scripting. No master mixes. Just a simple, intuitive workflow.



With the MagicPrep NGS system, the only thing you need to provide are your samples. No need to make master mixes or buffers, no need to buy additional reagents, no scripting or optimizing the workflow. Simply add your samples, insert the cartridges into the instrument, start the run, and continue your day.

## Accelerate your productivity.



What's the point of automation that requires you to babysit the instrument? The MagicPrep NGS system provides true walk-away automation for eight samples per run. Start your run in about 10 minutes and since there are no other user interaction steps, just walk away and accomplish your next task. Now you can start your library preparation at any time - after lunch, before going home or even on a Friday afternoon. MagicPrep NGS also stores your libraries for up to 65 hours, so retrieve your finished libraries when you are ready. Accomplish your library preparation and so much more each day.



# RELIABLE NGS LIBRARY PREPARATION REAGENTS.

The reagent kits for MagicPrep NGS leverage Tecan's proprietary technologies as well as novel technology specifically designed to provide a simple, fully walk-away solution. The MagicPrep NGS reagent kits include DimerFree\* technology to minimize the formation of adaptor dimers regardless of input amount, consistent enzymatic DNA fragmentation regardless of input amount or GC content and high-fidelity library amplification for accurate library representation. MagicPrep NGS reagents allow you to generate high quality libraries across a broad input range without the burden of manual library preparation.

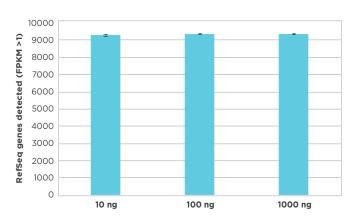


Figure 1: Consistent gene detection in mRNA-Seq libraries generated with MagicPrep NGS. Libraries were generated starting with 10 ng (16 libraries), 100 ng (24 libraries) or 1000 ng (16 libraries) of K562 total RNA. Data analysis showed similar general library metrics and consistent gene detection across the 100-fold difference in input.

#### A complete, reliable library preparation solution



The MagicPrep NGS kits provide all the reagents and consumables necessary for library preparation. All you have to do is provide your sample.

MagicPrep NGS kits incorporate all the advantages of Tecan's manual kits but are formatted for use on the MagicPrep NGS instrument, saving hours of hands-on time.

- · Broad input range and large input volume for easy sample addition
- DimerFree technology eliminates generation of adaptor dimers
- · Unique dual index (UDI) adaptors for flexible multiplexing and detection of index hopping

## Revelo® mRNA-Seq for MagicPrep NGS

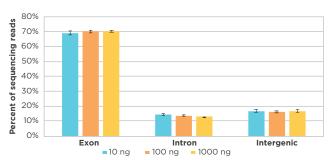


Figure 2: Consistent performance across a broad input range. The Revelo mRNA-Seq for MagicPrep NGS kit was used to generate libraries from 10 ng, 100 ng and 1000 ng of K562 total RNA. All libraries provided similar library metrics regardless of input.

The Revelo mRNA-Seq for MagicPrep NGS kit provides all the reagents and consumables necessary for poly(A) selection and mRNA-Seq library construction from total RNA. This kit and the MagicPrep NGS system provide a simple solution for the automated preparation of mRNA-Seq libraries.

- Broad input range from 10-1000 ng
- Efficient selection of polyadenylated transcripts

#### Revelo DNA-Seq Enz for MagicPrep NGS

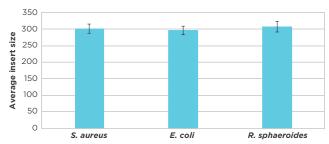
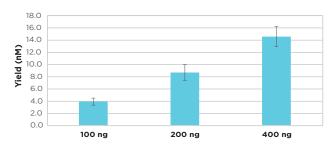


Figure 3: Reliable enzymatic DNA fragmentation regardless of GC content. Libraries were generated with 100 ng of a three bacterial genome mix with varying GC content (*S. aureus* (32% GC); *E. coli* (50% GC) and *R. sphaeroides* (68% GC)) using the Revelo DNA-Seq Enz for MagicPrep NGS kit. All genomes were represented as expected in the sequencing data. Insert size analysis shows similar insert sizes for all three genomes indicating that DNA fragmentation was not biased by the GC content.

The Revelo DNA-Seq Enz for MagicPrep NGS kit provides all the reagents and consumables necessary for enzymatic fragmentation of high-quality DNA followed by DNA-Seq library construction. This kit and the MagicPrep NGS system provide a simple solution for the automated preparation of DNA-Seq libraries.

- Broad input range from 50-500 ng
- Pre-optimized, consistent DNA fragmentation regardless of input

#### Revelo PCR-free DNA-Seq Enz for MagicPrep NGS



**Figure 4: Efficient library construction.** The Revelo PCR-free DNA-Seq Enz for MagicPrep NGS kit was used to generate libraries from a range of human genomic DNA inputs. After library construction, the yield of finished libraries was determined by qPCR. Sufficient library yield is generated for sequencing even with just 100 ng of genomic DNA.

The Revelo PCR-free DNA-Seq Enz for MagicPrep NGS kit provides all the reagents and consumables necessary for enzymatic fragmentation of high-quality DNA followed by DNA-Seq library construction without library amplification. This kit and the MagicPrep NGS system provide a simple solution for the automated preparation of PCR-free DNA-Seq libraries.

• Broad input range from 100-400 ng

#### Revelo DNA-Seq Mech for MagicPrep NGS

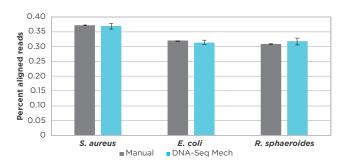


Figure 5: Consistent results across a broad range of GC content. The Revelo DNA-Seq Mech for MagicPrep NGS kit was used to generate libraries from 100 ng of a pre-fragmented mix of three bacterial genomes with varying GC content (S. aureus (32% GC); E. coli (50% GC) and R. sphaeroides (68% GC)). Sequencing results showed 99.9% uniformity and genome coverage for all three bacterial genomes. The fraction of reads from each genome is similar to results using a manual workflow demonstrating a low GC bias during automated library construction.

The Revelo DNA-Seq Mech for MagicPrep NGS kit provides all the reagents and consumables necessary for DNA-Seq library construction from pre-fragmented DNA. This kit and the MagicPrep NGS system provide a simple solution for the automated preparation of DNA-Seq libraries.

- Broad input range from 50-500 ng
- Highly sensitive solution for pre-fragmented genomic DNA



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