

# TruSeq® Stranded mRNA Library Prep Kit for NeoPrep™

Complete view of the transcriptome with walk-away workflow, lower input requirement, and excellent reproducibility.

#### **Highlights**

- Simplified and Seamless Workflow Solution
   NeoPrep workflow includes on-board quantification and normalization to deliver sequencing-ready libraries
- Unparalleled Performance and Reproducibility
   Generate libraries with TruSeq Stranded mRNA coverage
   and quality, with minimal hands-on time and reduced user
   variability
- Low Input Requirement
   Library prep with as little as 25 ng total RNA

# Simplified Library Prep with TruSeq Stranded mRNA Quality

TruSeq Stranded mRNA Library Prep Kits are the proven industry leader in library prep, providing the clearest and most complete picture of the coding transcriptome. TruSeq Stranded mRNA biochemistry is now supported by the NeoPrep Library Prep System, an integrated solution for preparing libraries for sequencing on any Illumina sequencing platform, making library prep far easier than ever before. The NeoPrep System eliminates most manual operations, reducing hands-on time from 4.5 hours to 30 minutes, while delivering 16 quantified and normalized sequencing-ready libraries (Table 1).

# NeoPrep Enhances RNA-Seq with Excellent Reproducibility and Accuracy

By using digital microfluidics, the NeoPrep System enhances TruSeq Stranded mRNA performance, ensuring high consistency in the results generated by multiple users. Digital microfluidics precisely manipulates droplets within a tightly controlled environment to perform the complete library prep workflow, including quantification and normalization (Figure 1).

## High Quality with Low Input Amounts

The NeoPrep system provides the same reliable, high-quality performance as manual TruSeq Stranded mRNA with as little as 25 ng of total RNA. This reduced input requirement extends the accessibility of TruSeq data quality to an even broader range of applications and study designs (Figure 2).

Table 1: Lab Efficiency Comparison

	Manual	NeoPrep
Reagent Kit	TruSeq Stranded mRNA Library Prep Kit	TruSeq Stranded mRNA Library Prep Kit for NeoPrep
Input	100-1000 ng	25-100 ng
Library Prep Assay Time <sup>a</sup>	~9 hours	~8 hours
Hands-On Time <sup>b</sup>	~4.5 hours	30 minutes
Library quantification device	Qubit instrument	N/A

- a. Library prep starting with total RNA to amplification; NeoPrep assay time with quantification and normalization is ~10.5 hours.
- b. Hands-on time is for 16 libraries from library prep through normalization.

#### Complete, Seamless Workflow Solution

The NeoPrep System is part of a complete workflow solution that begins with total RNA and ends with analyzed data. Combined with BaseSpace Core Apps click-and-go data analysis, NeoPrep Library Prep is part of a complete solution for RNA-Seq, empowering the research of any user regardless of experience with next-generation sequencing.



Figure 1: TruSeq Stranded mRNA Manual and NeoPrep Library Workflows – Manual and NeoPrep workflows begin with total RNA. Hands-on time is significantly reduced from ~4.5 hours to 30 minutes with the NeoPrep System.

## Summary

The TruSeq Stranded mRNA Library Prep Kit for NeoPrep combines the proven performance of TruSeq chemistry with the simplicity and reproducibility of the NeoPrep Library Prep System. Libraries prepared using the NeoPrep System can be run on any Illumina sequencing platform, and coupled with BaseSpace Core Apps for RNA for a seamless workflow solution. Supported at every step by the industryleading Illumina service team, the competitively priced NeoPrep System and kits enable walk-away library prep.

#### Learn More

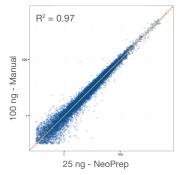
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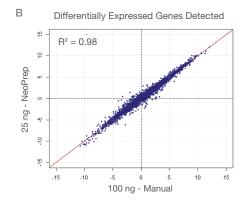
To learn more about the NeoPrep System, and to see a complete list of available kits, visit www.illumina.com/neoprep.

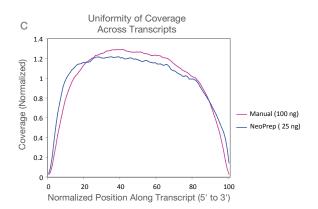
Table 2: Ordering Information

Kit Name	Catalog No.		
TruSeq Stranded mRNA Library Prep Kit for NeoPrep (16 samples, 24 indexes)	NP-202-1001		
System Name			
NeoPrep Library Prep System (installation included)	SE-601-1001		

## Concordance in Abundance Measurements (FPKM)









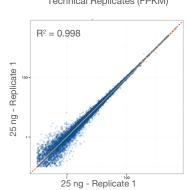


Figure 2: NeoPrep and Manual Library Prep Methods—The TruSeq Stranded mRNA Kit for NeoPrep performs equivalently to the manual kit.

- A) NeoPrep mRNA (25 ng) vs manual (100 ng), UHRR, 15986 genes; R2 = 0.97
- B) Log<sub>2</sub> Fold-Change UHRR/Brain of NeoPrep (25 ng) and manual (100 ng), UHRR vs brain, 15765 genes; R2 = 0.98
- C) Uniformity of coverage across transcripts—NeoPrep mRNA (25 ng), manual (100 ng)
- D) Correlation of technical replicates of NeoPrep mRNA (25 ng) UHRR, 16092 genes; R2 = 0.998001

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