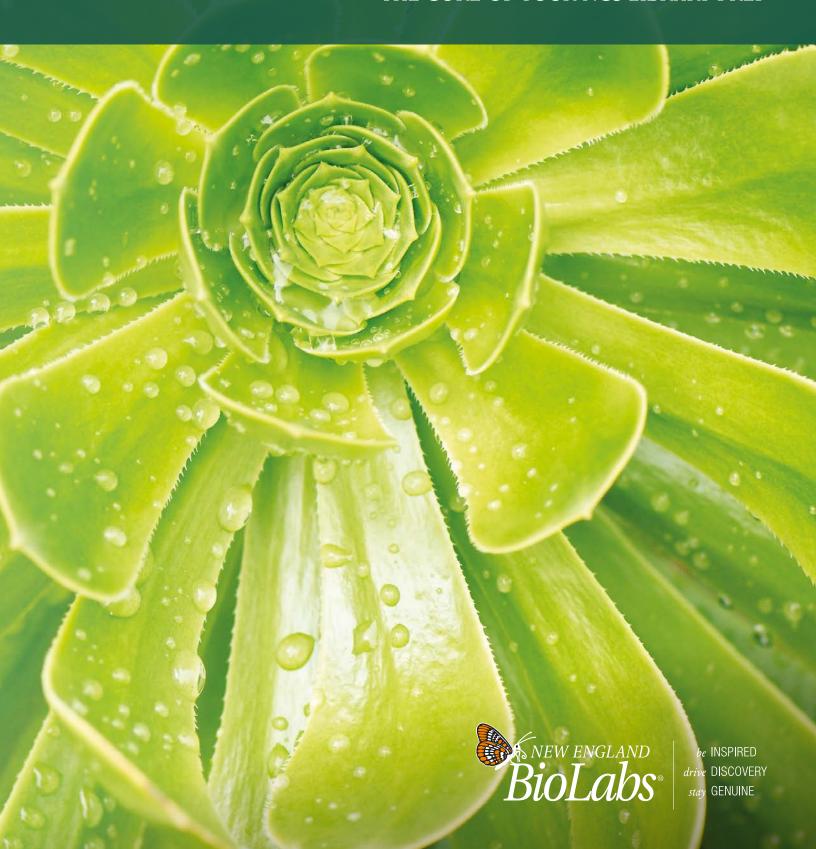
NEBNext® Ultra™ II Reagents & Kits

THE CORE OF YOUR NGS LIBRARY PREP



The heart of the matter

As sequencing technologies improve and applications expand, the need for compatibility with ever-decreasing input amounts and sub-optimal sample quality grows. Scientists must balance reliability and performance with faster turnaround, higher throughput and automation compatibility.

The NEBNext Ultra II workflow lies at the heart of NEB's portfolio for next generation sequencing library preparation. NEBNext Ultra II kits and modules for Illumina® are the perfect combination of reagents, optimized formulations and simplified workflows, enabling you to create DNA or RNA libraries of highest quality and yield, even when starting from extremely low input amounts.

The Ultra II workflow is central to many of our NEBNext solutions, including:

- Ultra II DNA & FS DNA Library Prep
- Enzymatic Methyl-seq
- Ultra II RNA & Directional RNA Library Prep
- Single Cell/Low Input RNA Library Prep
- Module products for each step in the workflow

The NEBNext Ultra II Workflow:

End Repair/dA-Tailing Adaptor Clean Up/Size Selection Enrichment Clean Up

Advantages of the Ultra II Workflow:

- Learn one central workflow and apply it to a suite of different applications
- Save time with streamlined, modular workflows, reduced hands-on time, and automation compatibility
- Benefit from low input amount requirements, fewer PCR cycles and uniform GC-coverage in all applications

What users are saying:

We've been testing EM-seq on a variety of inputs, platforms, and samples, and it shows more even coverage across CpG islands, the whole genome, and also greater detection of CpG sites across the genome vs. WGBS.

NEB is currently the only company, which is offering really ``automation friendly`` library preparation kits. The volumes of components are calculated to cover for unavoidable deadvolumes, reactant volumes are in range of most automated platforms. The stability of the NEBNext chemistry allows a broad range of automation strategies

Christopher Mason,Weill Cornell Medical SchoolNew York

Dr. Jürgen Zimmermann,
 Senior Engineer - Automation
 GeneCore EMBL Heidelberg, Germany

The NEBNext Ultra II Workflow

The Ultra II workflow is available in a convenient kit format, or as separate modules — it is easily scalable and automated on a range of liquid handling instruments. The NEBNext Ultra II workflow has been cited in thousands of publications, as well as a growing number of preprints and protocols related to COVID-19. Citation information and extensive performance data for each product is available on **www.neb.com**.

Choose the convenient NEBNext Ultra II DNA Library Prep Kit for:

- Whole Genome Sequencing
- Standard & Low Input Sequencing
- ChIP-seq, NICE-seq, Cut&Run-seq
- Exome Capture
- Targeted Sequencing
- FFPE Material
- cfDNA

Features

- Highest library yields and quality
- · Fewer PCR cycles
- Broad input range
 (500 pg to 1 μg sheared DNA)
- Less than 15 minutes of hands-on time
- Workflow complete in $\sim 2:30 3:00$ hours

The Ultra II DNA Workflow is Available in Convenient Kit Formats or Modules:



NEBNext Ultra II DNA Library Kit with Purification Beads (#E7103)



- Hands on time:<15 minutes
- Total time: ∼2:30 − 3:00 hrs

The Ultra II DNA Workflow is the Core of:

Enzymatic

DNA Fragmentation

Library Prep



You'll be thrilled to pieces.

Directional & Non-directional RNA-seq



Even more *from* less – now for RNA.

Enzymatic Methyl-seq (bisulfite-free)



Heads up!

Single Cell/ Low Input RNA Library Prep



How low can you go?

NEBNext Ultra II FS DNA Library Prep Workflow:



NEBNext Ultra II FS Library Prep Kit (#E7805)

NEBNext Ultra II FS DNA Library Prep with Sample Purification Beads (#E6177)

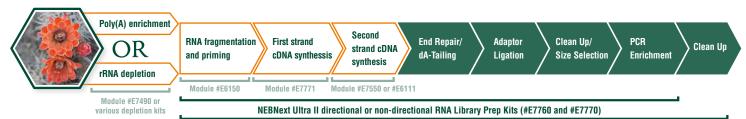
Ultra II DNA FS input amounts:

100 pg – 0.5 μg unsheared DNA



- Hands on time: <15 minutes
- Total time: ~ 2:30 hrs

NEBNext Ultra II Directional RNA or Non-directional RNA Workflow:



NEBNext Ultra II directional or non-directional RNA Library Prep Kits with Sample Purification Beads (#E7765 or #E7775)

Ultra II RNA input amounts:

5 ng – 1 μg total RNA (rRNA depletion) 10 ng – 1μg total RNA (poly(A) mRNA)



- Hands on time: <30 minutes
- Total time: $\sim 5:30 6:30$ hrs

NEBNext Enzymatic Methyl-seq Workflow:



NEBNext Enzymatic Methyl-seq Kit (#E7120) incl. Sample Purification Beads

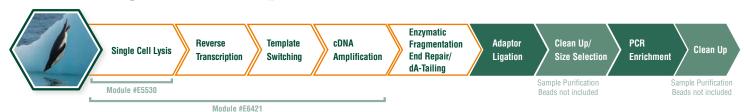
EM-seq input amounts:

10 ng – 200 ng



• Total time: 6 hrs - 7 hrs

NEBNext Single Cell/Low Input RNA Workflow:



NEBNext Single Cell/Low Input RNA Kit (#E6420)

Single Cell/Low Input RNA input amounts:

2 pg - 200 ng total RNA



- Hands on time: <30 minutes
- \bullet Total time: 6 hrs 7 hrs

Ordering Information

DNA KITS		NEB #	SIZE
	NEBNext Ultra II FS DNA Library Prep Kit for Illumina	E7805S/L	24/96 reactions
DNA	NEBNext Ultra II FS DNA Library Prep with Sample Purification Beads	E6177S/L	24/96 reactions
	NEBNext Ultra II DNA Library Prep Kit for Illumina	E7645S/L	24/96 reactions
	NEBNext Ultra II DNA Library Prep with Sample Purification Beads	E7103S/L	24/96 reactions
	NEBNext Enzymatic Methyl-seq Kit	E7120S/L	24/96 reactions
RNA KITS		NEB#	SIZE
Directional RNA	NEBNext Ultra II Directional RNA Library Prep Kit for Illumina	E7760S/L	24/96 reactions
	NEBNext Ultra II Directional RNA Library Prep with Sample Purification Beads	E7765S/L	24/96 reactions
Non-directional RNA	NEBNext Ultra II RNA Library Prep Kit for Illumina	E7770S/L	24/96 reactions
	NEBNext Ultra II RNA Library Prep with Sample Purification Beads	E7775S/L	24/96 reactions
Single Cell	NEBNext Single Cell/Low Input RNA Library Prep Kit for Illumina	E6420S/L	24/96 reactions
MODULES & ENZYMES		NEB #	SIZE
DNA	NEBNext Enzymatic Methyl-seq Conversion Module	E7125S/L	24/96 reactions
	NEBNext Ultra II End Repair/dA-Tailing Module	E7546S/L	24/96 reactions
	NEBNext Ultra II Ligation Module	E7595S/L	24/96 reactions
	NEBNext Ultra II FS DNA Module	E7810S/L	24/96 reactions
RNA	NEBNext Single Cell Lysis Module	E5530S	96 reactions
	NEBNext Magnesium RNA Fragmentation Module	E6150S	200 reactions
	NEBNext Ultra II RNA First Strand Synthesis Module	E7771S/L	24/96 reactions
	NEBNext Ultra II Directional RNA Second Strand Synthesis Module	E7550S/L	24/96 reactions
	NEBNext Ultra II Non-directional RNA Second Strand Synthesis Module	E6111S/L	20/100 reactions
	NEBNext Single Cell/Low Input cDNA Synthesis and Amplification Module	E6421S/L	24/96 reactions
Amplification	NEBNext Ultra II Q5 Master Mix	M0544S/L	50/250 reactions
	NEBNext Q5U Master Mix	M0597S/L	50/250 reactions
COMPANION PRODUCTS		NEB #	SIZE
Oligos	NEBNext Multiplex Oligos for Illumina (96 Unique Dual Index Primer Pairs)	E6440S/L	96/384 reactions
	NEBNext Multiplex Oligos for Illumina (96 Unique Dual Index Primer Pairs Set 2)	E6442S/L	96/384 reactions
	NEBNext Multiplex Oligos for Enzymatic Methyl-seq (Unique Dual Index Primer Pairs)	E7140S/L	24/96 reactions
	NEBNext Multiplex Oligos for Illumina (Dual Index Primers Set 1)	E7600S	96 reactions
	NEBNext Multiplex Oligos for Illumina (Dual Index Primers Set 2)	E7780S	96 reactions
	NEBNext Multiplex Oligos for Illumina (Index Primers Set 1)	E7335S/L	24/96 reactions
	NEBNext Multiplex Oligos for Illumina (Index Primers Set 2)	E7500S/L	24/96 reactions
	NEBNext Multiplex Oligos for Illumina (Index Primers Set 3)	E7710S/L	24/96 reactions
	NEBNext Multiplex Oligos for Illumina (Index Primers Set 4)	E7730S/L	24/96 reactions
	NEBNext Multiplex Oligos for Illumina (96 Index Primers)	E6609S/L	96/384 reactions
RNA Depletion	NEBNext rRNA Depletion Kit v2 (Human/Mouse/Rat)	E7400S/L/X	6/24/96 reactions
	NEBNext rRNA Depletion Kit v2 (Human/Mouse/Rat) with RNA Sample Purification Beads	E7405S/L/X	6/24/96 reactions
	NEBNext Globin & rRNA Depletion Kit (Human/Mouse/Rat)	E7750S/L/X	6/24/96 reactions
	NEBNext Globin & rRNA Depletion Kit (Human/Mouse/Rat) with RNA Sample Purification Beads	E7755S/L/X	6/24/96 reactions
	NEBNext rRNA Depletion Kit (Bacteria)	E7850S/L/X	6/24/96 reactions
	NEBNext rRNA Depletion Kit (Bacteria) with RNA Sample Purification Beads	E7860S/L/X	6/24/96 reactions

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Featured Tools



NEBNext Selector

For help with choosing the best reagents for your next generation sequencing sample preparation, try our NEBNext selector at **NEBNextselector.neb.com**.



Read Coverage Calculator

For help with calculation of values associated with read coverage in NGS protocols, try our Read Coverage Calculator at Readcoveragecalculator.neb.com.

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