

EpiCypher® partners with New England Biolabs® to codevelop CUT&RUN Library Prep Kit

Research Triangle Park, NC – February 08 2022 – EpiCypher, Inc. today announced a partnership with New England Biolabs, Inc. (NEB®) to codevelop a first-in-class library prep kit specifically optimized for best performance with their CUTANA® CUT&RUN epigenomic assays. This CUTANA CUT&RUN Library Prep Kit is powered by NEBNext® reagents from NEB, delivering a comprehensive and streamlined solution for preparation of CUT&RUN sequencing libraries.

CUT&RUN is rapidly replacing ChIP-seq as the leading chromatin mapping technology. In CUT&RUN, a fusion of protein A, protein G, and micrococcal nuclease (pAG-MNase) is used to selectively cleave antibody-labeled chromatin *in situ*, eliminating chromatin fragmentation and immunoprecipitation steps from ChIP to greatly simplify the assay workflow. Clipped fragments are easily isolated and purified, and the entire process is compatible with next-generation sequencing (NGS). This strategy virtually eliminates non-specific background and provides high quality mapping data using a fraction of the cell inputs, sequencing depth, and costs compared to ChIP-seq. Furthermore, the streamlined workflow has been fully automated for large-scale analyses, enabling the use of chromatin mapping for clinical research and personalized medicine.

A key step in CUT&RUN assays is the preparation of MNase-clipped fragments into sequencing-ready libraries. Existing library prep kits are designed for multi-purpose use and require supplemental reagents for specialized workflows, complicating assay development and increasing reaction costs. In addition, the general library prep protocols have been challenging to adapt for low yield CUT&RUN experiments. EpiCypher aims to address these concerns with a user-friendly and cost-effective library prep kit specifically developed for CUT&RUN.

Among leading library prep systems, EpiCypher found that NEBNext reagents from NEB consistently delivered the highest quality CUT&RUN libraries across multiple targets and DNA inputs.

“We worked with NEB to develop the first made-for-purpose library prep kit for CUT&RUN assays,” said Dr. Michael-Christopher Keogh, Chief Scientific Officer at EpiCypher. “The inclusion of NEBNext technology into our optimized workflow provides the highest quality reagents to fully realize the low-input capabilities of CUT&RUN.”

The CUTANA CUT&RUN Library Prep Kit from EpiCypher provides all the reagents needed to efficiently generate sequencing libraries, including NEBNext reagents, DNA purification beads, and indexing primers.

“We have taken an all-inclusive approach to our kit design that takes the guesswork out of library prep,” said Dr. Martis Cowles, Chief Business Officer at EpiCypher. “We look forward to additional collaborations with NEB, a life science company that is world-renowned for its innovative and high-quality products.”

About EpiCypher

EpiCypher® is dedicated to developing transformative epigenetic solutions that advance the science of epigenetic regulation and improve human health. Most recently, EpiCypher has been at the leading edge of chromatin profiling technology with highly sensitive CUTANA™ epigenomic mapping assays for ChIC, CUT&RUN, and CUT&Tag. The Company also manufactures and sells the largest collection of defined “designer” nucleosomes (dNucs) on the market and offers a range of high-throughput nucleosome-based assays and services for chromatin research and drug development. For more information about EpiCypher, visit www.epicypher.com

About New England Biolabs

Established in the mid 1970's, New England Biolabs, Inc. (NEB) is the industry leader in the discovery and production of enzymes for molecular biology applications and now offers the largest selection of recombinant and native enzymes for genomic research. NEB continues to expand its product offerings into areas related to PCR, gene expression, sample preparation for next generation sequencing, synthetic biology, glycobiology, epigenetics and RNA analysis. Additionally, NEB is focused on strengthening alliances that enable new technologies to reach key market sectors, including the development of molecular diagnostics, as well as nucleic acid vaccines. New England Biolabs is a privately held company, headquartered in Ipswich, MA, and has extensive worldwide distribution through a network of exclusive distributors, agents and eight subsidiaries located in Australia, Canada, China, France, Germany, Japan, Singapore, and the UK. For more information about New England Biolabs visit www.neb.com

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