NEW ENGLAND BioLabs® Inc.

*be* INSPIRED
*drive* DISCOVERY
*stay* GENUINE

# Flexible Precision.

## NEBNext Direct® Custom Ready Panels for NGS target enrichment

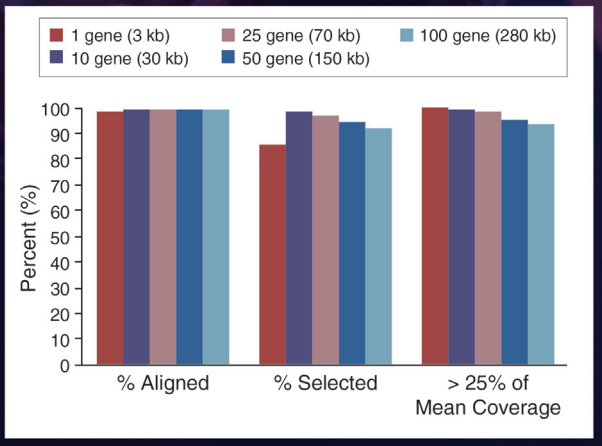
Employing the unique NEBNext Direct hybridization-based enrichment method, NEBNext Direct Custom Ready Panels allow rapid customization of targeted gene panels for Illumina® sequencing. Select from a list of genes for which baits have been carefully designed and optimized to give complete coverage of the full coding regions. High quality panels can be designed by you and rapidly delivered, from any combination of genes. NEBNext Direct Custom Ready Panels provide the content you want with the performance you need.

- Choose from a single gene to hundreds of genes
- Experience unmatched specificity and coverage uniformity
- Eliminate synthesis and optimization steps for faster turnaround
- Improve sensitivity with our Unique Molecule Index (UMI)
- Generate results in one day with our automation-friendly workflow

For more information visit

**NEBNextDirect.com**

**NEBNext Direct Custom Ready Panels demonstrate optimum performance across a wide range of panel sizes**




*Key target enrichment metrics demonstrate consistent performance across a range of panel sizes. 100 ng of DNA was tested against panels of 1, 10, 25, 50 and 100 genes, and sequenced using Illumina® paired-end 150 bp sequencing. Larger panels included all genes present in smaller panels.*

# New to single-cell sequencing?

that's GOOD science!

## Takara Bio has the solutions you need.

- **SMART-Seq® HT kit**—streamlined full-length cDNA library prep
- **SMART-Seq Stranded kit**—complete RNA library prep that captures coding and noncoding RNAs
- **SMARTer® PicoPLEX® Gold kit**—accurate detection of SNVs and CNVs from single cells
- **SMARTer™ ICELL8® system**—automated high-throughput single-cell isolation, selection, and processing

SMARTer NGS

To learn more:
takarabio.com/SMARTerNGS

TaKaRa

Clontech TaKaRa cellartis

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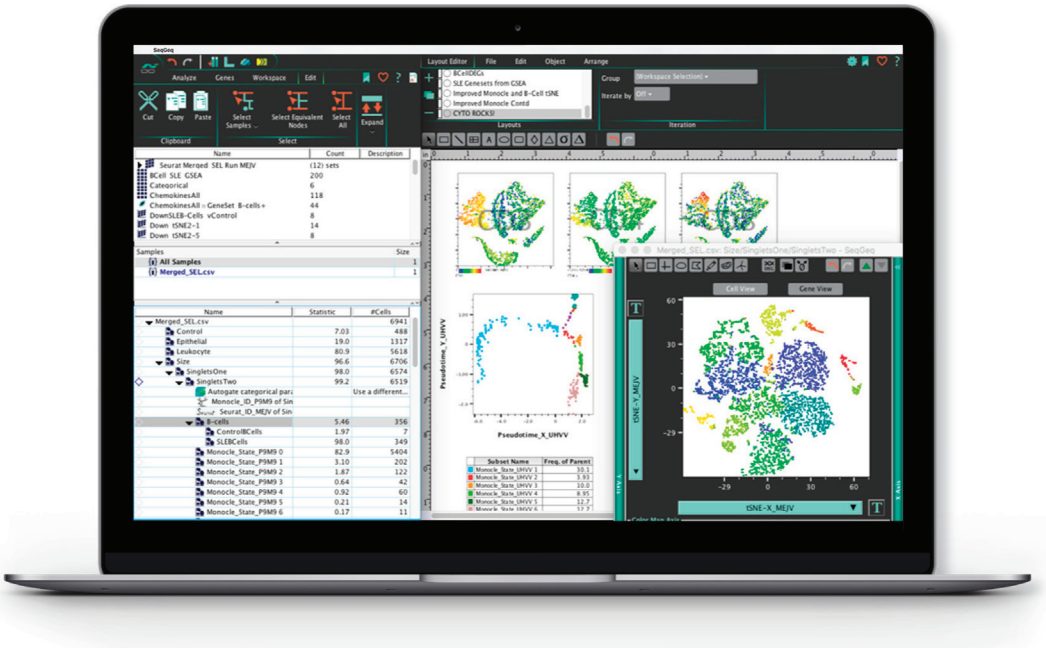
United States/Canada: +1.800.662.2566 • Asia Pacific: +1.650.919.7300 • Europe: +33.(0)1.3904.6880 • Japan: +81.(0)77.565.6999

**For Research Use Only. Not for use in diagnostic procedures.**

# SeqGeq

The world is waiting for your results.
Unlock your scRNA seq data in minutes.

SeqGeq (seek-geek) is a desktop bioinformatics platform that makes complex scRNA seq analysis accessible with an intuitive interface. With SeqGeq, you control your analysis—no more writing R scripts to visualize your data.



Easily share your results for publication and collaboration. With our wide library of available plugins on the FlowJo Exchange, you can superpower your analysis with the most cutting-edge informatics tools.

## Discover the difference

**www.flowjo.com/solutions/seqgeq**

BD

BD and FlowJo are one!
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## NGS SERVICES FOR TARGETED SEQUENCING

- Experimental Design Services
- Project Management by Dedicated Scientists
- Best-in-Class Library Preparation and Enrichment
- Sequencing on Illumina® and PacBio® Systems

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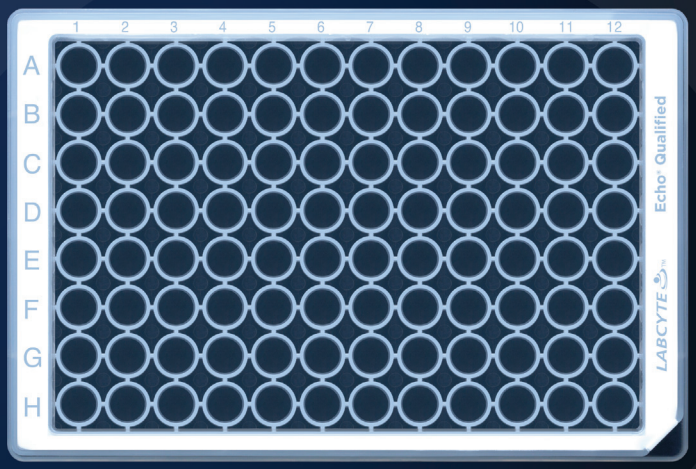
Coming soon...


# 96 New Reasons to Buy an Echo® Liquid Handler

## Introducing the Echo® Qualified 96-well Microplate

A favorite for genomics applications, the Echo® 525 Liquid Handler saves reagents, sample, and time. Transfer of nanoliter volumes with high accuracy and precision enables assay miniaturization while maintaining data quality. Coming soon, Echo Qualified 96-well Microplates will link the unsurpassed performance of the Echo System with upstream sample preparation steps performed in a 96-well format.

- **Qualified by Labcyte for reproducible acoustic performance**
- **High transparency with high contrast well locators for quick sample identification**
- **Compatible with the Echo 525 Liquid Handler**

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# Ultra-pure dNTPs at unbeatable prices

## Description

dNTPs contain dATP, dCTP, dGTP and dTTP (monosodium salts) at a concentration of 10mM or 100mM each in sterile deionized water at pH7.5, whose purity is up to 99.5% (HPLC). It is free of RNase and DNase, and suitable for any molecular biology application that requires pure deoxynucleotides, such as PCR, DNA sequencing, cDNA synthesis and nick translation.

## Stability

All of our dNTPs are very stable – we guarantee 100% stability for 2 years from the date of purchase.

## Features

·Ultra-pure: >99% by HPLC
·Reliable, consistent results
·Available both as ready-to-use mix and a set

## Applications

·PCR and qPCR
·cDNA synthesis
·Primer extension
·DNA sequencing
·DNA labeling
·Mutagenesis

## Quality control

·Purity assay (HPLC) >99%
·Free of pyrophosphate, DNA and RNA
·DNase, RNase and nickase free
·Tested for PCR, qPCR and RT-PCR

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MilliporeSigma

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The SygRNA® synthetic, crRNA:tracrRNA and one-part sgRNA systems accelerate genome editing. Pair with Cas9 protein, mRNA, or established Cas9 expressing cell lines. Deliver by a variety of methods including microinjection, electroporation, and lipofection.

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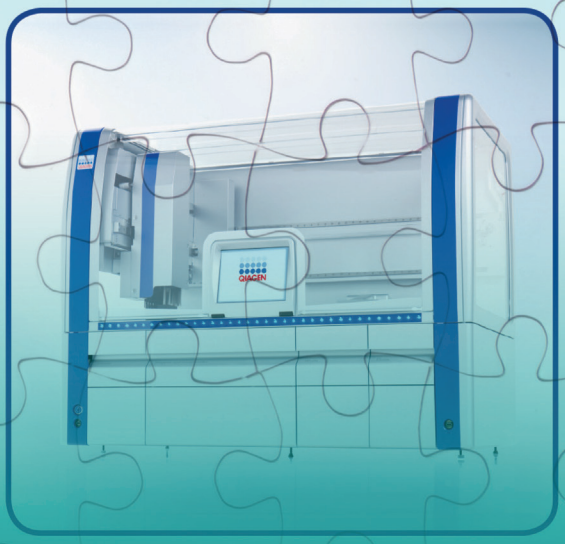
# All the pieces are in place

Discover the **PAXgene® Blood ccfDNA System**: a complete, integrated preanalytical workflow solution for circulating cell-free DNA

Sample Collection & Stabilization → Circulating DNA Isolation →




- **Non-crosslinking preservation** of ccfDNA levels
- **Seamless integration** with proven ccfDNA isolation kits
- Streamlined with **primary tube sampling** during automated processing
- Designed for sensitive research assays, including analysis of **circulating tumor DNA** and **non-invasive prenatal testing**

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# Introducing the Sequel® II System

## Delivering Highly Accurate Long Reads


NOW WITH 8X THE DATA

## Explore these applications to drive your next discovery

**WHOLE GENOME SEQUENCING**

Generate high-quality *de novo* assemblies

**VARIANT DETECTION**

Call all variant types (SNVs, InDels, SVs, CNVs)

**RNA SEQUENCING**

Characterize isoform diversity with full-length transcripts

## Sequence with Confidence

**See the proof at pacb.com/sequel**

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# AACR ANNUAL MEETING 2020

THE SAN DIEGO CONVENTION CENTER APRIL 25-29

For more information
as it becomes available, visit

AACR.org

AACR American Association for Cancer Research®

FINDING CURES TOGETHER®

# CSHL Meetings & Courses

aerial view of CSHL sandspit and inner harbor during meeting social

## 2019 Meetings

**Ubiquitins, Autophagy & Disease** April 23 - 27
**Telomeres & Telomerase** April 30 - May 4
**The Biology of Genomes** May 7 - 11
**Mechanisms of Metabolic Signaling** May 14 - 18
**Retroviruses** May 20 - 25
**84th Symposium: RNA Control & Regulation**
May 29 - June 3
**Microbiome** July 18 - 21
**Cell Death** August 13 - 17
**Eukaryotic mRNA Processing** August 20 - 24
**Mechanisms of Eukaryotic Transcription**
August 27 - 31
**Eukaryotic DNA Replication & Genome Maintenance**
September 3 - 7
**Microbial Pathogenesis and Host Response**
September 10 - 14
**Stem Cell Biology** September 17 - 21
**Biology of Cancer: Microenvironment & Metastasis**
September 24 - 28
**Neurobiology of *Drosophila*** October 1 - 5
**Genome Engineering: Frontiers of CRISPR/Cas**
October 10 - 13
**Yeast Research: Origins, Insights, Breakthroughs**
October 23 - 26
**Genome Informatics** November 6 - 9
**Single Cell Analyses** November 13 - 16
**Zebrafish Neural Circuits & Behavior** November 20 - 23
**Plant Genomes, Systems Biology & Engineering**
December 4 - 7
**Development & 3D Modeling of the Human Brain**
December 9 - 12

## 2019 Fall Courses

**Workshop on Cereal Genomics** October 15 - 21
**Programming for Biology** October 15 - 30
**X-Ray Methods in Structural Biology**
October 15 - 30
**Advanced Sequencing Technologies & Applications** November 5 - 17
**The Genome Access Course** November 11 - 13
**Scientific Writing Retreat** November 13 - 17
**Computational Genomics** December 4 - 11

**meetings.cshl.edu**

## Preview of our early 2020 Meetings

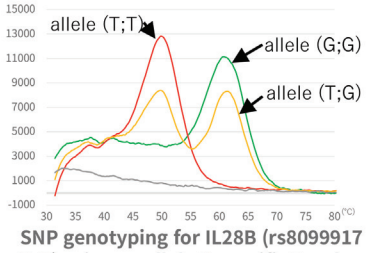
**Systems Biology: Global Regulation of Gene Expression** March 11 - 14
**Neuronal Circuits** March 18 - 21
**The PARP Family & ADP-ribosylation** April 1 - 4
**Gene Expression & Signaling in the Immune System**
April 14 - 18
**Protein Homeostasis in Health & Disease** April 21 - 25
**Genome Organization & Nuclear Function**
April 28 - May 2
**The Biology of Genomes** May 5 - 9
**Regulatory & Non-Coding RNAs** May 12 - 16
**Retroviruses** May 18 - 23

Eprobe® / Eprimer™ fluorescent probe

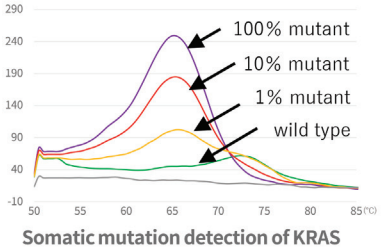
# A novel solution for SNP/somatic mutation detection

**Eprobe is a DNA-based fluorescent probe which emits fluorescence when specifically binding to a complementary strand. Melting curve analysis after PCR can detect SNP genotype and somatic mutations. Two fluorescent dyes (thiazole orange and thiazole pink) are available.**

- **High resolution SNP detection**—Increased Tm (approx.10°C) by the thiazole orange enables a shorter probe design and a clearer distinction of SNPs
- **Simple and highly sensitive somatic mutation detection**—sensitive detection of somatic mutations (down to 0.1%) can be achieved by suppression of PCR amplification of wild-type alleles by Eprobe (PCR clamping)
- **Compatible with most real time PCR instruments**—fluorescence emitted by Eprobe can be detected using a filter for SYBR® Green I* *SYBR® is a registered trademark of Molecular Probes, Inc.
- **Easy to use online design tools**—a design tool for a primer/Eprobe (E-design, www.dnaform.com/edesign2/) and a thermodynamic calculation tool (ECHO, www.dnaform.com/devel/echo/thermodynamics/) are available



SNP genotyping for IL28B (rs8099917 T;G) using an allele G specific Eprobe



Somatic mutation detection of KRAS G12D using an wildtype specific Eprobe.

| Fluorphore (excitation/emission) | 1.5 nmol | 3.0 nmol | 5.0 nmol | 10.0 nmol |
|---|---|---|---|---|
| Thiazole orange (510 nm / 530 nm) | 19,000 JPY ~~38,000 JPY~~ | 30,000 JPY ~~60,000 JPY~~ | 45,000 JPY ~~90,000 JPY~~ | 70,000 JPY ~~140,000 JPY~~ |
| Thiazole pink (570 nm / 590 nm) | 45,000 JPY | 70,000 JPY | 110,000 JPY | 170,000 JPY |

**Special offer for new customers**

**50% OFF the list price!**

All Thiazole orange-labeled products

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**www.dnaform.jp/en/products/fluorecent_oligonucleotide/eprobe_eprimer/**

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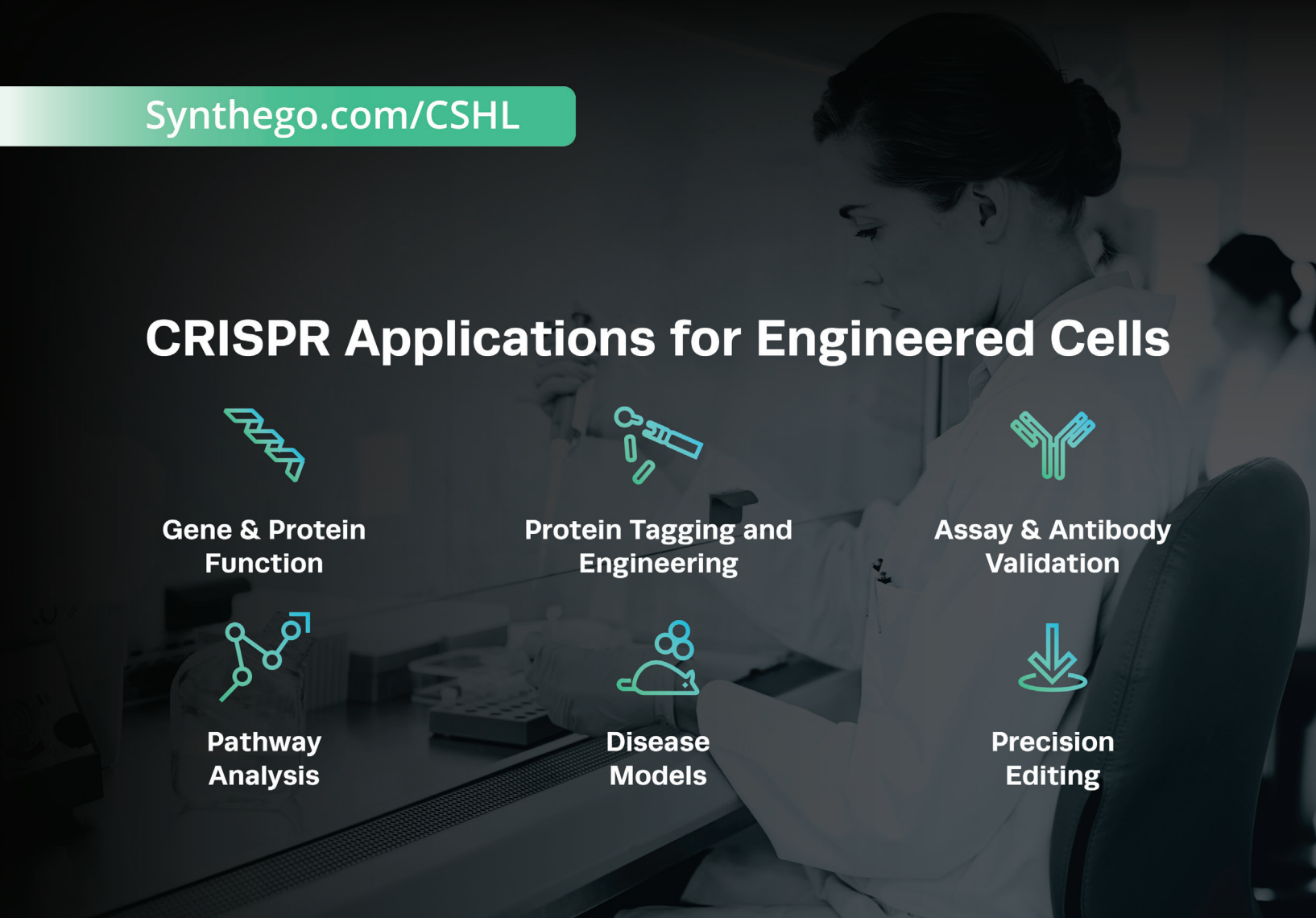

## CRISPR Applications for Engineered Cells

- Gene & Protein Function
- Protein Tagging and Engineering
- Assay & Antibody Validation
- Pathway Analysis
- Disease Models
- Precision Editing