RAPID GENOMICS

FLEX-SEQ® EX-L
PORCINE 3K

Ultra High-Throughput Genotyping For Swine Breeding

About Flex-Seq® Ex-L: Porcine 3K

The Flex-Seq® Ex-L: Porcine 3K (P3K) ultra high-throughput targeted genotyping panel is a breeding tool for commercial porcine genetic evaluation and selection. Focused on scalability paired with data accuracy, reproducibility, and completeness, the Flex-Seq® Ex-L: P3K panel leverages the power of next-generation sequencing to address industry-scale genotyping needs.

Comprised of 3,005 DNA markers evenly spaced throughout the genome, selected from known informative porcine SNP data, Flex-Seq® Ex-L: P3K data ensures compatibility with legacy datasets and is designed for routine breeding objectives including genomic selection, imputation, marker-assisted selection and parentage analysis.

Rapid Genomics offers Flex-Seq® Ex-L: Porcine 3K genotyping solutions for routine breeding, starting from tissue or DNA to SNP calls, with results delivered in as few as 2 weeks.

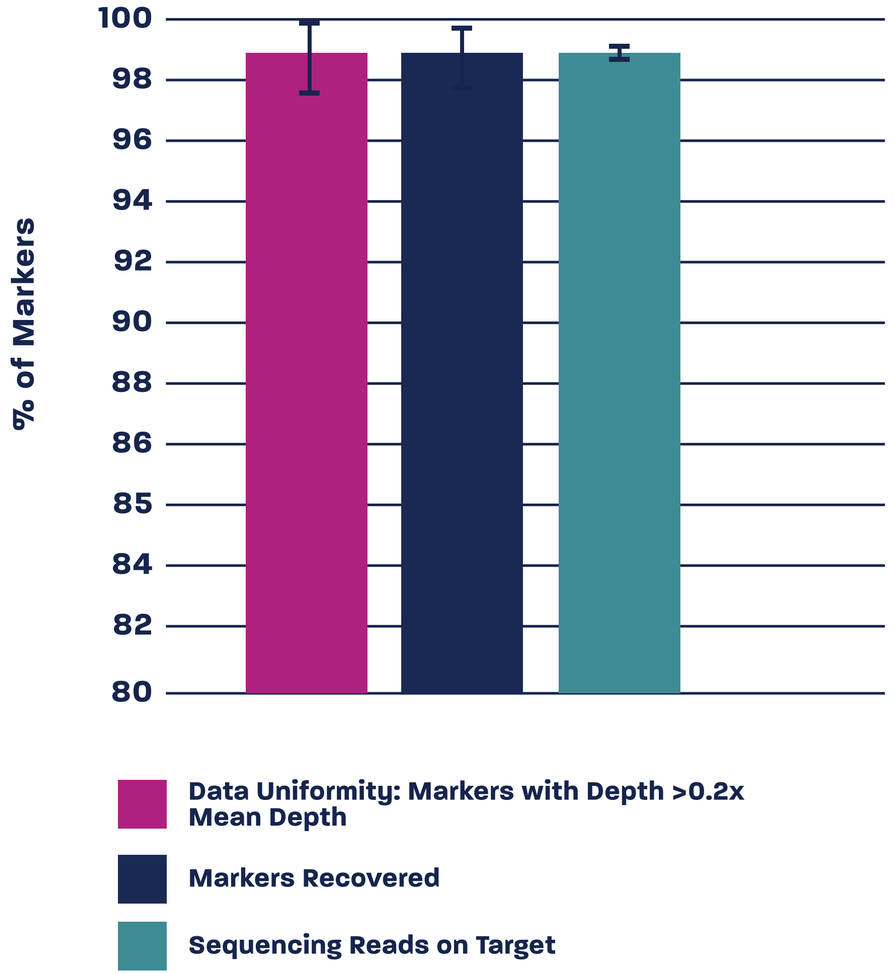
If your breeding program requires custom genotyping tools, including for multiple breeds or objectives, novel Flex-Seq® Ex-L panels are easily developed and applied for high-throughput genotyping.

Flex-Seq® Ex-L: P3K Summary

- 3,005 markers for genetic evaluation & breeding selection
- 97% agreement with array technology
- 99% agreement between technical reps
- >98% marker recovery
- 99% on-target sequencing
- TSUs and other sample types accepted

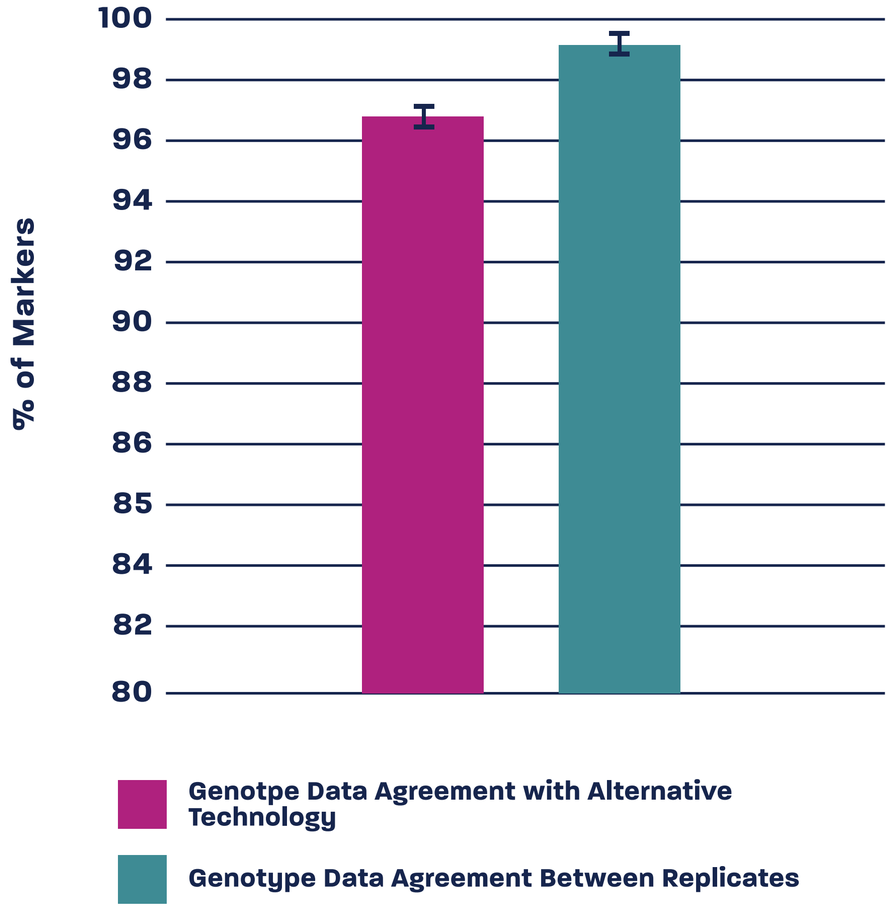
Flex-Seq® Ex-L: P3K Panel Performance

Summary metrics of representative genotyping data. Data Uniformity displays the percentage of markers with >0.2x mean sequence depth (>98%). High uniformity between markers ensures consistency and repeatability among genotyped samples. Markers Recovered shows the percentage of markers (>98%) with sufficient depth for accurate genotyping (i.e. 10X per haploid genome). Sequencing Reads on Target reflects the reaction specificity, with 99% of all the aligned sequencing reads mapping to intended targets. The combination of high marker recovery, data uniformity and reaction specificity ensures overall completeness of genotype data from sample to sample.



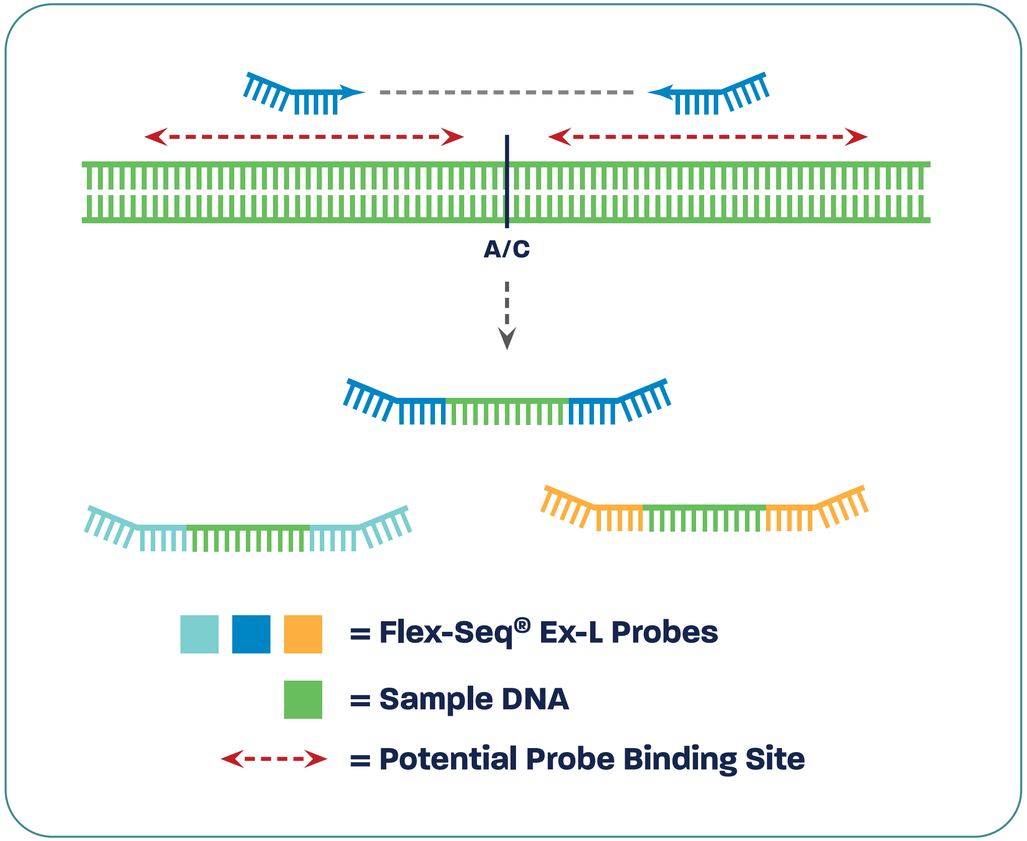
Flex-Seq® Ex-L: P3K Genotype Agreement and Compatibility

97% agreement with genotyping results from alternative technologies ensures compatibility with legacy datasets. The near-perfect (99%) agreement of Flex-Seq® Ex-L: P3K replicates ensures consistent, reliable genotyping data for routine breeding applications on an ongoing basis.



Flex-Seq® Ex-L Technology

Flex-Seq® Ex-L technology utilizes the Ex-L probe system to flexibly and reliably target genetic markers of interest throughout the genome. Two Ex-L probes are designed around each target marker, choosing the best DNA binding sites for reliable data recovery and providing greater ability to target specific markers of interest vs chip-based arrays. Additionally, Ex-L probe technology enables higher multiplexing capacity and superior data quality vs PCR, ensuring enough markers are recovered for each sample for genetic evaluation and breeding selection.



Using Flex-Seq® Ex-L

Don't See Exactly What You're Looking For?

Custom Flex-Seq® Ex-L genotyping panels can be developed using 3 easy steps:

1 Panel Design & Planning

- Genotyping markers & goals
- Bioinformatic design service
- Design review & consultation

2 Panel Design Validation

- Validate genotyping results
- Data pipeline optimization
- Finalize panel design

3 Panel Design & Planning

- Genotyping markers & goals
- Bioinformatic design service
- Design review & consultation

LEADING A NEW ERA OF GENOMICS

At Rapid Genomics, the key to improving the future is within the secrets of the genome. Our mission is to expand global access to the technologies required for uncovering those secrets with the highest standards of accuracy and reliability. We provide flexible solutions to a range of commercial and research interests focused on agriculture, veterinary genomics, healthcare, and evolutionary biology. Our customers partner with us to advance their goals and, ultimately, strengthen the industries that do everything from producing our food to curing disease.

RAPID GENOMICS

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