Scientific Symposium

Vector integration analysis using Oxford Nanopore Technologies

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Abstract

Targeted Locus Amplification (TLA) sequencing serves as a robust assay for the genetic quality control (QC) of transgenic cell lines, providing a comprehensive assessment of vector integrity, integration sites, and nearby genomic rearrangements. Despite its comprehensiveness, TLA encounters limitations in fully elucidating the complexity of vector concatemers within integration loci. To overcome this, Cas9-targeted nanopore sequencing, utilizing Oxford Nanopore Technologies, has emerged as an pivotal supplementary tool. While TLA identifies the junctions of concatemers, nanopore sequencing offers an enhanced resolution, enabling the precise determination of concatemer order and complete reconstruction of the integration locus. This capability is particularly crucial for discerning tandem repeats and analyzing genetic stability.
In this talk, we will explore the synergistic application of TLA and nanopore sequencing for thorough integration locus analysis, ensuring a more accurate and detailed assessment of transgenic cell lines.

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Solvias AG, Römerpark 2, 4303 Kaiseraugst, Switzerland

Free

For inquiries or assistance with registration, please contact us at marketing@solvias.com.