

The Stem-Seq™ range

Service

stemgenomics
cell integrity



Stem Genomics introduces the **Stem-Seq™ range**: advanced sequencing solutions designed to **deliver deeper genomic insight with greater clarity**. Tailored specifically for the detection of genomic abnormalities in human pluripotent stem cells, the range offers targeted NGS or Whole Genome Sequencing **to suit your needs and budget**. All options include our **expert data interpretation services**, helping you convert large-scale genomic data into meaningful results for your research work.

1. Targeted NGS-assays: a deeper understanding of targeted regions of interest



1.1 Stem-Seq™ Panel key specifications at a glance

- A wide range of **375 genes** with known associations to cancer according to recognized database references (including TP53, etc.), and genes known to be recurrently mutated in hPSC (Salomonis N. et al. 2016, Merkle et al. 2020, Avior et al. 2020, Merkle et al. 2022).
- Deep sequencing of targeted genes with **1000x coverage**, and a high resolution of **1% mosaicism/VAF** to capture SNVs and Indels.
- Fully interpreted results delivered as a concise summary report.
- Delivery in 4-5 weeks (depending on the report option selected).



1.2 Stem-Seq™ Plus key specifications at a glance

- **A comprehensive solution** that combines both **SNV and CNV detection in one assay**.
- **SNVs and Indels capture**: deep sequencing of targeted genes with **1000x coverage**, and a high resolution of **2% mosaicism/VAF**.
 - The panel contains **375 genes** with known associations to cancer according to recognized database references (including TP53, etc.), and genes known to be recurrently mutated in hPSC (Salomonis N. et al. 2016, Merkle et al. 2020, Avior et al. 2020, Merkle et al. 2022).
- **CNV detection**: deep sequencing across key genomic regions with **1000x** and a high resolution of **15% mosaicism***.
 - This sequencing approach uses a **backbone** and a **Pool of Normal (PON)** to enable a **more accurate analysis** of the large regions covered by CNVs and reduce false positives.
- **Fully interpreted results** delivered as a **concise summary report**.
- Delivery in **4 to 5 weeks**, depending on the selected report.

2. Stem-Seq™ WGS key specifications at a glance

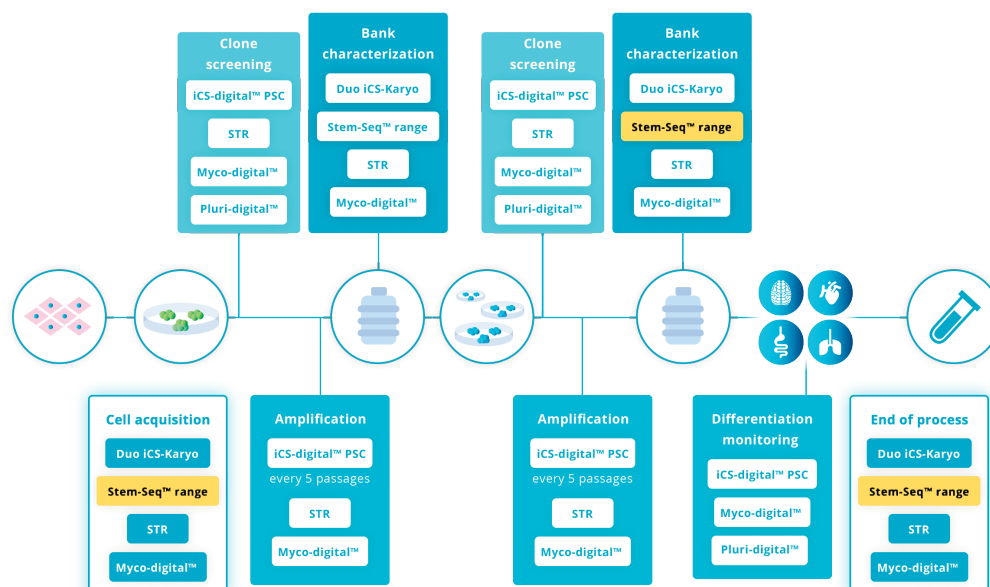


- An exhaustive view of the genome combining **SNV, CNV and SV** detection in one assay.
- Two sequencing depths in accordance with **FDA guidelines**:
 - 60x
 - 100X
- Mosaicism: 5% for SNV, 10% to 15% for CNV and 5% for SV.
- Fully interpreted results delivered as a **concise summary report**.
- Dedicated **expert assistance** if needed.
- Delivery in just **4 weeks**.

➔ **All you need to do is:** send your gDNA sample at **room temperature**.
Analysis available starting from **1 sample** so you do not need to wait for other samples before processing begins!

	Stem-Seq™ Panel	Stem-Seq™ Plus	Stem-Seq™ WGS	Stem-Seq™ WGS
Coverage	1000X	1000X	60X	100X
Data amount	2Gb	10Gb	200Gb	335Gb
SNV mosaicism	1%	2%	10%	5%
CNV mosaicism	N/A	15%	15%	10%
SV mosaicism	N/A	N/A	5%	5%
Scope	Targeted genes	Targeted + Backbone	Full genome	Full genome
Approach	Sensitive	Sensitive	Comprehensive	Comprehensive
gDNA amount	200ng		1µg US/ 2µg EU	1µg US/ 3µg EU
TAT	4 Weeks			
Price	\$	\$\$	\$\$\$	\$\$\$\$

Practical testing guidelines for hPSC workflow



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