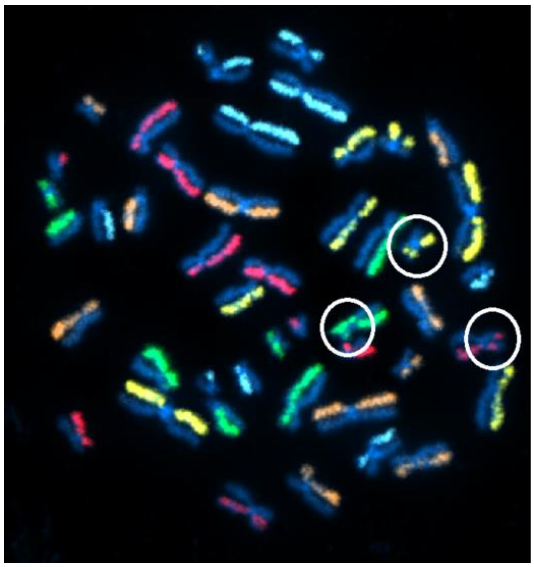
KromaTiD

DATA SHEET

Monitor Structural Variants and Genomic Stability with dGH SCREEN™ Assays

directional Genomic Hybridization™ Single-Cell Rearrangement Event Evaluation and Numbering (SCREEN) is a single cell assay designed to monitor structural variants throughout the genome in an entirely de novo fashion. By utilizing directional Genomic Hybridization™ technology, combined with strategic labeling patterns and chromosomal morphologies, dGH SCREEN™ provides the most comprehensive and high-resolution karyographic analysis available. dGH SCREEN™ is designed to discover and quantify structural variants within heterogeneous cell populations and can be used to analyze blood derived cells, cell lines, iPSCs, CAR T and many more cell types.



Above: dGH SCREEN™ detects multiple structural rearrangements in metaphase cell from GM cell line.

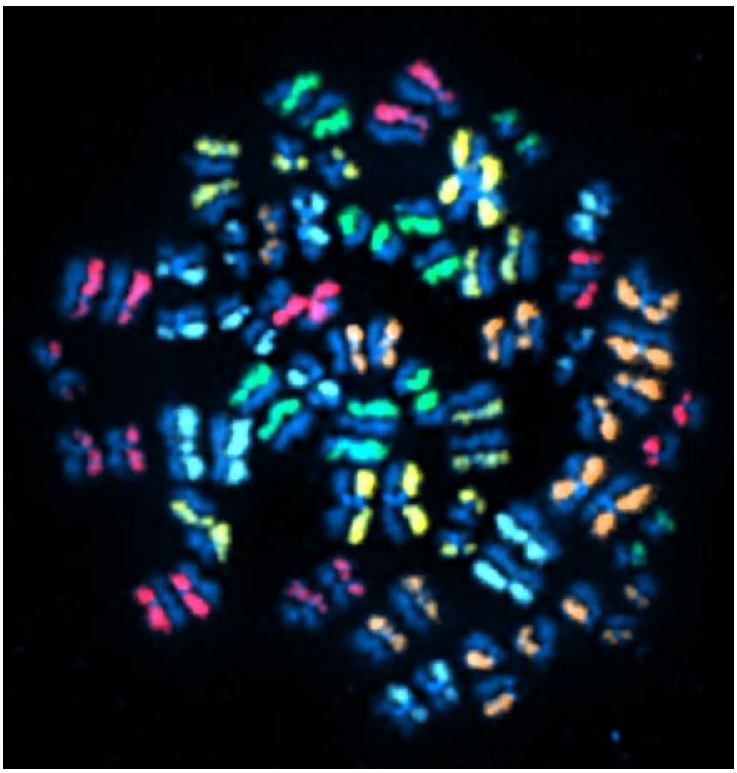
Key analytic features of dGH SCREEN™ Assay Services

- Exchange events including reciprocal, balanced and allelic translocations
- Orientation events including inversions, recombination, and sister chromatid exchanges
- Chromosomal gain and loss events, including sister chromatid fusions, dicentrics and acentrics, fragmentation and chromothripsis, polypoidy, aneuploidy, monosomy, and polysomy

Above: Inversion / sister chromatid exchange in chromosome 13 detected by dGH SCREEN™ in GM cell line.

Applications of dGH SCREEN™ Assay Services

- **Monitoring cellular engineering outcomes**
  - Genome-wide, cell-by-cell and chromosome-by-chromosome assessment of structure, pre- and post modification
- **Orthogonal data for sequencing**
  - Genome-wide, confirmatory data regarding rearrangements predicted with long read and other NGS analyses
- **Structural integrity for quality control**
  - Measure the relative stability of cell lines. Screen and compare candidate cell lines, based on total genomic structural variation metrics.
- **Genomic Stability Assessment**
  - Track persistence of variants over time, passages, and process variable changes.



Left : Endoreduplication indicating possible genomic instability detected with dGH SCREEN™ in a lymphoblastoid cell line.