Hematotoxicity Testing

HALO®-Tox HT: The Most Advanced In Vitro
Hematotoxicity Screening and Testing Platform

- For all stem and progenitor cell hematotoxicity/bone marrow toxicity requirements.
- Compare and rank potential toxicity according to compound type, species and cell population.
- Assess the effects of drug combinations and interactions.
- Determine the therapeutic index.
- Determine hematonanotoxicity.
- Combine with HALO® Real Time to determine the kinetics of toxicity.
- Detect residual hematotoxicity and drug sensitivity to stem cells.
- High (>80%) in vitro to in vivo concordance.
- Multiplex with other assay readouts to save time, samples and costs and help determine mechanism of action (MOA).
- Incorporates proven ATP bioluminescence readout.
- Fully standardized and validated according to FDA Bioanalytical Method Validation Guidelines.
- Includes measurement assurance parameters to ensure trustworthy results.
- High-throughput screening for ADME/Tox early stage drug development or later stage optimization.
- Predictive lympho-hematotoxicity routinely available using 2 stem cell populations. (Other stem cell populations available upon request).
- Routinely available for up to 7 lineage-specific cell populations, plus up to 6 lymphopoietic cell populations.
- Available for human, primate, dog, rat and mouse. Other species available upon request.
- Results in 4-7 days depending on species and cell population(s) detected.
- Target human tissues include bone marrow, cord blood, peripheral blood (normal and mobilized) and purified cells from these tissues (e.g. human CD34+ cells).
- Target animal tissues include bone marrow, peripheral blood spleen, fetal liver, embryonic tissue.
- Suspension Expansion Culture™ (SEC™) Technology makes methylcellulose colony-forming cell (CFC) assays obsolete.
- Raw data and IC values from HALO®-Tox HT correlate directly with CFC assay, with HALO®-Tox HT demonstrating greater sensitivity, accuracy and precision than the CFC assay.
- Use for lympho-hematopoietic stem cell toxicity and/or myelotoxicity where neutropenia, thrombocytopenia and/or anemia may be prevalent.
- Study potential system hematotoxicity using HALO®-Tox HT “Global” assays for 4-, 5- or 7-populations.
- Both 96- and 384-well plate formats depending on study size and complexity. All studies performed using liquid handlers to ensure the highest accuracy and precision.
- All studies performed using a minimum of 6 doses for IC value estimates and 8 replicates for the highest statistical relevance.
- Combine with other HemoGenix® assays using the same ATP bioluminescence readout for other proprietary toxicity platforms that are incorporated into the ComparaTOX™ Platform.