

Take Your Research to the Next Level

Coming Soon: miR-122 Liver Injury Detection Assay

The idea of using microRNAs as potential biomarkers is a hot research topic. Ideally, a biomarker of tissue injury should be:

- Abundant
- Preferentially (or exclusively) produced in the tissue of interest
- Present at low concentrations in the blood and other body fluids

microRNAs fulfill the criteria for an ideal biomarker and showcase superior sensitivity compared to existing enzyme-based biomarkers. These characteristics have established circulating miRNAs as promising biomarker candidates for toxicological studies and indicators of drug-induced tissue injury for safety assessments.

Specifically, miR-122 has emerged as a novel biomarker for early detection of liver injury compared to existing alanine aminotransferase (ALT) and aspartate aminotransferase (AST), which lack specificity and sensitivity. Moreover, miR-122 is also being used to evaluate drug safety profiles earlier in drug development which helps minimize financial loss due to late-stage drug failure.

SMCxPRO® Platform and ChemiRNA™ Technology

Overcome sample preparation and amplification challenges associated with miRNAs to get accurate ultrasensitive quantification without the need for PCR. The combination of the SMCxPRO® platform and ChemiRNA™ technology empowers you to detect miRNAs in biofluids with better reproducibility and ease of use compared to other technologies.



Key Features:

- **Precision:** Single Molecule Counting (SMC®) technology enables precise measurement of molecules at levels previously undetectable for unprecedented biomarker insights.
- **Flexibility:** The SMCxPRO® platform can be used for protein and genomic biomarkers on the same platform.
- **Accuracy:** ChemiRNA™ Tech provides accurate quantitative miRNA profiling without extraction, pre-amplification, or pre-labeling.
- **Simplicity:** ChemiRNA™ Tech stabilizes RNAs in biofluids, removing the need for refrigeration, sample handling and extraction.

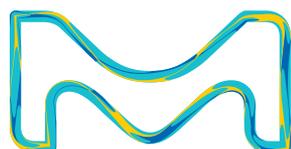
Attend our live session at Biomarkers UK to hear more on this exciting new technology.

Topic: Customized assays for PCR-free absolute quantification of miRNAs directly from body fluids on the SMCxPRO® platform. An example of miRNA-122 as a liver toxicity assay.

Speaker: Juan J. Díaz-Mochón, Chief Executive Officer at DESTINA Genomics LTD

The SMC® miR-122 Liver Injury Detection Assay will be available soon. Contact one of our Sales Specialists to learn more at SigmaAldrich.com/smc-info.

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