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## Press - Release

### Alu-assay tool for quality assessment in single cell and cell-free DNA analysis.

**Göteborg, Sweden, January 8th, 2019**

Most PCR reagents, including master mixes, primer and probe solutions, and buffers, are contaminated with residual human genomic DNA (gDNA). For measurements on conventional samples the contamination is negligible, but it can be very important, even detrimental, in single cell and rare mutation analyses. To test the purity of reagents TATAA Biocenter has developed ultra-sensitive qPCR assays targeting human specific Alu repeats. These comprise about 10 % of the human genome and the TATAA assays reliably detect even minuscules amounts of human gDNA contamination. Contaminated reagents can then be cleaned with the Heat/Run gDNA removal kit.

The TATAA Alu assays are available for different target lengths, which makes it possible to characterize the integrity of gDNA. The ratio measured with TATAA ALU-60, which amplifies 60 bp targets, to TATAA ALU-187, which amplifies 187 bp targets, assesses the level and fraction of cell-free DNA (cfDNA) in liquid biopsy samples. cfDNA originates mainly from apoptotic tissue and is predominantly of mononucleosomal length (145 - 165 bp), while cellular DNA from leaked blood cells is high molecular. While the ALU-60 assay measures virtually all human gDNA present, the ALU-187 assay only amplifies human gDNA longer than the mononucleosomal repeat and the ratio sensitively reflects the degree of short fragments. It is a simple, most reliable quality indicator of serum and plasma samples collected for cfDNA analyses. The ALU quality control panel was in part developed for the CANCER-ID consortium, developing standard operating procedures for liquid biopsy, and as quality control tool for ring trials run in collaboration with the SPIDIA consortium standardizing the preanalytical workflow.

**About TATAA Biocenter**

TATAA Biocenter is world's largest organizer of hands-on training in quantitative real-time PCR and Next Generation Sequencing, Europe's leading provider of nucleic acid analysis services, and Sweden's most comprehensive distributor of products for molecular analyses. TATAA Biocenter offers a seamless workflow for high quality analyses of nucleic acids from experimental design, sample preparation, quality control, and data analysis, meeting the specific requirements for compliance with ISO17025 standard. Founded in 2001, TATAA Biocenter has laboratories in Gothenburg, Sweden, and in Prague, Czech Republic. In 2013 TATAA Biocenter was presented the Frost & Sullivan Award for Customer Value Leadership as Best-in-Class Services for Analyzing Genetic Material.

Please follow the links for more information on:

TATAA Biocenter:

[www.tataa.com](http://www.tataa.com)

TATAA ALU assays:

[https://webshop.tataa.com/product.html/tataa-alu-assay?category\\_id=66](https://webshop.tataa.com/product.html/tataa-alu-assay?category_id=66)

Heat&Run gDNA removal:

[https://webshop.tataa.com/product.html/heatrun-gdna-removal-kit?category\\_id=27](https://webshop.tataa.com/product.html/heatrun-gdna-removal-kit?category_id=27)

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