Quanterix SR-X® Compatibility for Simoa® Synuclein (total) Advantage PLUS Assay

Overview

This document describes compatibility of the Simoa® Alpha-Synuclein (total) Advantage PLUS assay (Item #105737) on the Quanterix SR-X® platform. This compatibility report aims to complement and expand upon the validation data presented in the Alpha-Synuclein (total) Advantage PLUS Validation Report, available on the Quanterix® customer portal¹. The validation report details analytical assay performance, including LLOQ, LOD, and measurement of normal samples. Compatibility of the Alpha-Synuclein Advantage PLUS assay was demonstrated through comparative analysis of the assay's performance across the Simoa HD-X Analyzer® and SR-X platforms using a sub-set of parameters from the validation report. Further validation of assay performance may be required prior to initiating large projects with the assay on the SR-X platform, depending on specific in-house regulations. Users should build familiarity with the workflow for the assay kits on the SR-X, following the Kit Instructions provided, for optimal results. If further information is needed, please contact Techsupport@Quanterix.com.



Assay Performance

The analytical performance of Alpha-Synuclein (total) Advantage PLUS assay on the HD-X platform can be obtained from the HD-X Data Sheet available on the Quanterix customer portal². Table 1 compares the quantitation limit, and the detection limit and Figures 1-3 provide curve comparisons and sample reading correlation between HD-X and SR-X platforms for Alpha-Synuclein (total) Advantage PLUS.

Tables 1. Quantification and detection limits Alpha-Synuclein (total) Advantage PLUS assays across HD-X and SR-X platforms. Refer to the assay specific HD-X data sheet for additional details on HD-X, like detectability and quantifiability². Triplicate measurements of serially diluted calibrator were read back on the calibration curve over one run for one reagent lot, across one instrument on the SR-X platform.

| Assay Parameters Comparison Alpha-Synuclein (total) | | |
|--|------------------------|----------------|
| | HD-X per Data Sheet | SR-X |
| Curve profiling LLOQ | 8.7040 pg/mL | 8.7600 pg/mL |
| Functional LLOQ Plasma/Serum (Analytical LLOQ x MRD) | 278.5280 pg/mL | 280.3200 pg/mL |
| Functional LLOQ CSF (Analytical LLOQ x MRD) | 69.6320 pg/mL | 70.0800 pg/mL |
| LOD | 2.4736 pg/mL | 2.0900 pg/mL |

١. **Calibrator Comparison**

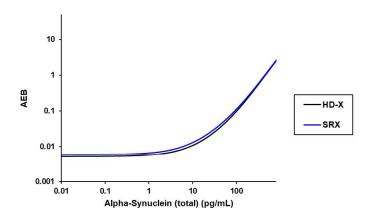


Figure 1. Comparison of the calibration curves for Alpha-Synuclein (total) Advantage PLUS kits across HD-X (black) and SR-X (blue) platforms for one reagent kit lot.

II. Sample reading correlation between SR-X and HD-X

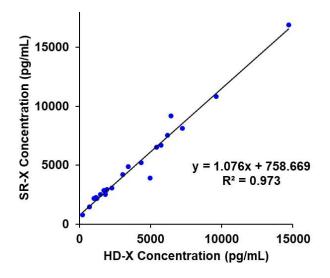


Figure 2. Correlation between HD-X and SR-X for Alpha-Synuclein (total) Advantage PLUS assay for 11 normal human serum and 11 normal human EDTA plasma samples (Slope = 1.076, R² = 0.973) for one reagent kit lot.

III. **Sample Reading**

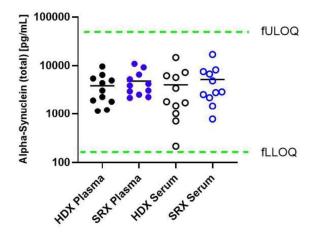


Figure 3. Alpha-Synuclein (total) levels for 11 serum and 11 EDTA plasma samples from presumably healthy individual donors on HD-X and SR-X instruments for one reagent kit lot. The green dashed lines indicate the $fULOQ\ and\ fLLOQ\ of\ the\ Alpha-Synuclein\ (total)\ Advantage\ PLUS\ assays.$

Summary

Comparability of the Simoa® Alpha-Synuclein (total) Advantage PLUS (Item #105737) between the Simoa HD-X Analyzer® and Quanterix SR-X® platforms was evaluated by measuring LLOQ, LOD, and sample reading correlation. The Alpha-Synuclein (total) Advantage PLUS assay demonstrated similar sensitivity on the SR-X platform when compared to the HD-X platform. Overall, the Alpha-Synuclein (total) Advantage PLUS assay was shown to function on the SR-X platform and with data highly comparable to that generated on the HD-X platform.

For more information on the Alpha-Synuclein (total) Advantage PLUS assay and other Simoa® assay kits, please visit the Customer Portal: https://portal.quanterix.com

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Simoa® Alpha-Synuclein (total) Advantage PLUS Kit SR-X Compatibility Report Item 105737

References

- Alpha-Synuclein (total) Advantage PLUS Validation
 Report
- 2. Alpha-Synuclein (total) Advantage PLUS Data Sheet