somalogic

SomaScan® Assay 7K Kit

FAQ

Applications

Can you support lower throughput applications that do not require the Tecan?

We do not support lower throughput applications at this time. All SomaScan Service Providers are required to have a dedicated Tecan Fluent 780 on site.

Are mouse serum and plasma cell pellets compatible with SomaScan Assay 7K Kit?

Yes, you can process mouse samples using the plasma, serum, or cell/tissue kits. We provide a technical document covering how to adjust the workflow to accommodate these sample types.

Can we run our own custom panels using the platform?

Custom panels are currently not part of SomaLogic's services nor are custom reagents qualified on the platform.

What matrices does the SomaScan Assay 7K Kit support?

Human serum, human plasma, urine, cerebral spinal fluid, cell lysate and tissue homogenate.

Can we run plasma samples that contain EDTA?

Plasma samples containing EDTA are compatible with the SomaScan Assay 7K Kit. Other chelating agents such as Citrate and Heparin are also compatible.

Can the SomaScan Assay 7K Kit be used for diagnostic purposes?

The SomaScan Assay 7K Kit is designated for research use only (RUO) applications. All materials and reagents associated with the kits may only be used for their intended purpose. The SomaScan Assay 7K, SomaScan Assay 7K Kit, and SOMAmer® reagents are developed, designed, intended, and sold for research purposes only and not for use in diagnostic procedures.

Does your platform detect Metabolomics?

The SomaScan Assay 7K has roughly 900 analytes on the menu relevant to Metabolomics, over 200 more analytes compared to nearest competitors. Please visit https://menu.somalogic.com/ and filter by "Metabolic Diseases" to obtain a full list of the Metabolomics portion of our menu.

Does your platform detect Peptides?

The SomaScan Assay 7K does not detect peptides. SOMAmer reagents are designed to bind a specific protein epitope present in a folded protein. Please visit https://somalogic.com/technology/ for more information regarding the SomaScan Assay, SOMAmer reagents and applications of our platform.

What types of kits do you offer?

We offer kits for the following sample matrices: human serum, human plasma, urine, cerebral spinal fluid, cell lysate and tissue homogenate. Individual kits without Agilent array slides are also available.

Can you run different sample matrices on the same plate?

Processing various samples on a single plate is limited to the diluent used for the desired samples. For instance, human serum and human plasma use the same diluent and therefore are compatible. Another example would be processing the same sample matrix but from different species such as human plasma and mouse plasma. An incompatible situation would be serum and urine. These samples have different dilution groups (serum has three, urine has one) and different diluents. This renders them incompatible to be processed on the same plate.

Customer Service

How are service contracts supported if there is a SomaLogic equipment issue?

SomaLogic SomaScan equipment purchases include a one-year warranty.

Can you help our customers with study design?

We provide additional study design consulting as requested through our Production Bioinformatics Team and Scientific Engagement Teams.

What is the process for assay technicians to get trained and certified?

Field Applications Scientist (FAS) will perform a mock assay for trainees to observe followed by mock runs for each trainee. Each operator then runs the SomaScan Assay 7K Kit with supervision of FAS. Certification is complete upon completion of two successful assay runs without supervision.

Can kit sites engage both non-profit and for-profit clients?

Yes.

Do you provide quality assurance/control services for kit runs?

We provide QC visibility through the SomaScan Quality Statement. Here we provide pass/fail criteria for each sample when referenced to calibrator and quality control samples. Samples that fall out of our passing criteria are flagged and excluded from analysis.

How long does it take to ship a kit from the point you get a PO?

Contracts state 30 days from the point a PO is received.

Do you have a reagent rental program?

No, we do not provide a reagent rental program at this time.

We have three to four new employees a year. Do you charge extra for training them as they arrive?

There will be a charge associated with all onsite training. Please consult your SomaLogic representative for additional information.

What is the shelf life of the SomaScan Assay 7K Kit?

We currently guarantee three months of shelf life from date of shipment. We are working to extend shelf life and will provide you with updates as our studies conclude.

Data Analysis

Can we apply Adapative Normalization Maximum Likelihood (ANML) or do our own normalization?

Data for core sample types are delivered with and without ANML normalization, which allows for quantitative comparison across sample sets by removing analytes that deviate from the reference sample. You may use the ANML normalized data or use your preferred normalization strategy.

Do you offer analysis software?

Analytics tools are currently in development and a pilot program is scheduled for 2022.

How do you process the raw data generated by the assay?

Text files and Sample Import Sheet are uploaded to Box. Feature extraction occurs at customer site where .tiff files from Agilent scanner are converted to .txt files. Data processing from .txt files is performed by SomaLogic where RFU for each SOMAmer reagent is returned to the customer.

How do I analyze my data on-premises?

We are currently creating an on-premises data analytics solution.

What analysis support do you provide?

Primary analysis is provided through our data standardization process. We are currently working to release an on-premises data processing workflow. We do not offer any secondary (clinical) analysis support.

What is the processing time for analysis?

Contracts guarantee seven business day turnaround, though three business days are typical. Turnaround time can vary.

Do you offer a stand-alone solution for the software to transform the data?

We currently offer a seven-business-day turnaround time for data analysis that is supported by SomaLogic. A user-facing analytics solution is still in development.

How do customers transfer Agilent Microarray TIFF data to SomaLogic?

Only text files are uploaded to Box, along with a workbook which includes a Sample Import Sheet. The .tiff images are not transferred since the feature extraction is done from the .tiff to the .txt files on site (and the .tiff files are very large). Agilent .txt feature data (one per subarray) are transferred to SomaLogic via Box.

I'm an international customer. How do you process my data?

Text files and Sample Import Sheet are uploaded to Box. Feature extraction occurs at customer site where .tiff files from Agilent scanner are converted to .txt files. Data processing from .txt files is performed by SomaLogic where RFU for each SOMAmer reagent is returned to the customer.

Do you offer data processing on-premises or on-cloud?

We are currently creating an on-premises data analytics solution.

SomaScan Assay

What equipment is needed to run the SomaScan Assay 7K Kit?

The SomaScan Assay 7K Kit requires a Thermo Magnetic Shaker, automated liquid handler, microarray scanner and various other pieces of smaller equipment. For a full overview of equipment requirements, please contact a SomaLogic representative.

How much space is needed to run the SomaScan Assay 7K Kit system?

Customers are required to have one dedicated room for the SomaScan Assay 7K Kit system. The room should be around 150 square feet and temperature-controlled.

Do you have stability data to show consistency over time, over lots, etc.?

Our current expiration dating is produced from ongoing studies that show that a particular buffer, reagent or component is stable and produces quality data. We do see some slight variation in lot-to-lot performance of some components. This is why we run the same calibrator and QC samples across multiple runs as that variation can be corrected for.

Can you offer absolute quantification?

We currently provide relative quantification as a readout. Please contact a sales representative for more information regarding data analysis.

Will the assay perform the same at sea level versus altitude?

Yes, performance will be the same at both elevations.

Can we just use multi-channel pipettors until we have enough volume for a robot?

There is no manual version of the SomaScan Assay 7K Kit.

What does the assay workflow look like?

After initial sample preparation steps, the semi-automated workflow proceeds. A SOMAmer-protein binding step is followed by a series of partitioning and wash steps to convert relative epitope concentrations into measurable nucleic acid signals that are quantified using DNA hybridization microarrays. Running the assay itself takes roughly 10-11 hours. For more detailed information regarding the assay principle and more by downloading our technical note here: https://share.hsforms.com/1hZNFGjLJSluRGgVajUM7wA3zbc6

How many full-time employees do I need to run the assay?

At a minimum one full-time employee. We would strongly suggest two full-time employees if you are running more than one assay per week.

What method are you using to identify high specificity, high sensitivity SOMAmer reagents for identifying proteins of interest?

We use the systematic evolution of ligands by exponential enrichment (SELEX) process.

What percentage of menu is mammalian cell expressed?

Roughly 59% of the reagents on the SomaScan 7K Assay menu detects analytes expressed in mammalian cell lines.

Why are aptamers better than antibodies?

SOMAmer (Slow Off-Rate Modified Aptamers) reagents are synthetic, ssDNA sequences with protein-like appendages. The appendage modified to the DNA oligo allow for the aptamer to bind a protein target more tightly and with a slower off-rate than achieved by an antibody against the same target. The advantage of the slow off-rate permits the SomaScan Assay to achieve higher specificity due to the “tight fit” achieved by each unique SOMAmer reagent and the respective target whereas an antibody would exhibit a higher off-rate and increased chance to non-specifically bind an analyte in the sample.

What is a reasonable sample throughput estimate per day or per week?

Each robot system can accommodate two assay runs per day with two groups of analysts in a 10-to-11-hour time frame. This translates to 680 samples per week.