

Project/Sample Submission for SomaScan:

GTAC@MGI requires all samples be submitted with the correct submission form and template matrix. Samples must be randomized across the 96 sample matrix. Samples received without submission forms, or forms missing required information will not be processed until complete information is provided.

Samples should be provided in well labeled 1.5ml tubes, with the unique label matching the sample name on the submission form. As well, please include PI and date on the submission form.

GTAC can accommodate projects in the following manner:

- 1. Ideally, samples should be submitted in sets of 85 as these Plasma or Serum SomaScan kits are provided only as 85 sample reaction kits.*
- 2. Projects of smaller sizes can be submitted for kit sharing; however, the wait time to begin processing is unknown in order to match other small projects to the 85 sample kit runs.*
- 3. If you cannot fill an entire kit, but do not wish to wait to be matched with another project, we can begin per your approval. (GTAC can run some samples as technical replicates if sample volume allows.) Please note that you will be charged for all 85 reactions if you wish to proceed with an entire kit.*

NOTE: Improperly prepared samples may impact analyte measurements. In addition, light scattering can be indicative of particulates of sufficient size to clog filters during a SOMAScan Assay run, which could lead to a failed sample run.

Quality control for microarray:

Prior to processing samples through the SomaScan assay, GTAC microarray will evaluate all submitted protein. Initial QC specifications will require an email confirmation if you wish to proceed with processing. If a sample should fail due to a technical error, investigators will only be charged for the samples that were completed.

SomaScan exports and analysis:

Agilent SOMAScan slides will be processed through the Agilent scanner and image data will be extracted using Agilent Feature Extraction software. Extracted initial raw signal intensity data will be uploaded onto the SOMAScan server for data QC and standardization. The final data set will include SOMAScan generated .adat file, a reformatted text file with standardized relative fluorescent unit (RFU) for ~7K proteins, SOMAScan Quality Statements (SQS) and basic differential expression.

Sample Matrix	Required Sample Volume
Human plasma ³ (EDTA, citrate, CTAD, heparin; all collection tube types ²) Non-human primate plasma Mouse, dog, cat, pig, marmot plasma	130 μ L
Human serum (all collection tube types) Non-human primate serum Mouse, dog, cat, pig, marmot serum	130 μ L
Human urine	550 μ L
Human CSF Non-human CSF	100 μ L
Human bone marrow aspirate Human synovial fluid (pre-treated)	130 μ L
Cell lysate Tissue homogenate BAL Lymphocytes Amniotic fluid Nuclear extract Exosomes Wound Fluid Stool*	(two 30 μ L aliquots, provided in Matrix1 tubes) * extracted stool samples must be received in two 30 μ L aliquots in Matrix1 tubes All samples are normalized by BCA at 200ug/ml.
Human aqueous humor Cell culture conditioned media CSF Sputum Nasal lavage Vitreous humor	100 μ L
Rat plasma Rat serum Saliva Blister Fluid Bovine plasma, milk Sheep plasma	50 μ L