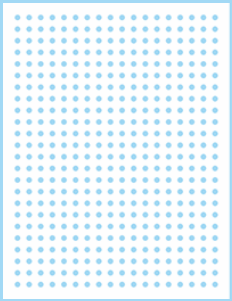
Analysis Report



Olink® Explore

PROJECT NAME	DemoMay22
ISSUE DATE	2022-05-24
CONTACT	N/A
	N/A
BUSINESS DEVELOPMENT MANAGER	N/A
	N/A
ANALYSIS LAB	Olink Uppsala
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1. Project information

No. of samples	No. of plates	Normalization method
352	4	Intensity normalization

1.1 Sample type

N/A

1.2 Project specific comments

The following Explore 384 Inflammation II assay did not meet Olink's batch release quality control criteria and is therefore not included in this project: KNG1.

2. Quality control

Three internal controls are added to each sample, the Incubation control, the Extension Control and the Amplification control. The Extension Control is used for the generation of the NPX values. The Incubation Control and the Amplification Control are used to monitor the quality of assay performance, as well as the quality of individual samples.

Three external controls are included in each run, the Plate Control (healthy pooled plasma), Sample Control (healthy pooled plasma) and Negative Control. The Plate Control is used for data normalization, the Sample Control is used to assess potential variation between runs and plates, and the Negative Control is used to calculate Limit of Detection for each assay and to assess potential contamination of assays.

The following parameters are evaluated in the Quality Control (QC):

1. The average matched counts [1] for each sample. To pass QC, there should be at least 500 counts, otherwise the sample receives a QC warning status.

2. The deviation from the median value of the Incubation- and Amplification Controls for each individual sample. To pass QC, the deviation should not exceed +/-0.3 NPX for either of the internal controls, otherwise the sample will receive a QC warning status.

3. The deviation of the median value of the Negative Controls from a predefined value set for each assay. To pass QC, the deviation of the median of the Negative Controls must be ≤5 standard deviations from the set predefined value, otherwise the assay will receive a warning status.

[1] The number of reads for each specific combination of sample and assay

All samples included in the project are presented in the data output file. Samples that do not pass the QC are indicated with WARN in the column named QC_warning. Data points from samples that do not pass QC should be treated with caution. Manual QC warnings are indicated with MANUAL_WARN in the column named QC_warning. Section 2.1 reports the fraction of samples that pass QC for all assays per panel and the fraction of data points passing QC per panel. Samples with manual QC warning are counted as not passed QC. Assays that do not pass the QC are indicated with WARN in the column named Assay_warning. Data points from assays that do not pass QC should be treated with caution.

2.1 QC summary

Olink Panel	Samples passed QC	Samples passed QC (%)	Datapoints passed QC	Datapoints passed QC (%)
Explore 384 Cardiometabolic	216 / 352	61	85598 / 129888	66
Explore 384 Cardiometabolic II	311 / 352	88	124779 / 129184	97
Explore 384 Inflammation	228 / 352	65	86326 / 129536	67
Explore 384 Inflammation II	307 / 352	87	124097 / 129888	96
Explore 384 Neurology	205 / 352	58	83462 / 129184	65
Explore 384 Neurology II	326 / 352	93	126193 / 129184	98
Explore 384 Oncology	222 / 352	63	85566 / 129536	66
Explore 384 Oncology II	335 / 352	95	127725 / 129536	99

2.2 Intra- and Inter-assay Coefficient of Variance (%CV)

Intra- and inter-CVs are based on the Sample Controls (pooled plasma samples) included on each sample plate. Calculations are made for each assay using NPX-values. Average % CV for all assays on a panel is presented in section 2.2.1. The number of assays with CVs within defined intervals are presented in sections 2.2.2 and 2.2.3.

2.2.1 Average %CV

Olink Panel	Intra-assay %CV	Inter-assay %CV
Explore 384 Cardiometabolic	15	22
Explore 384 Cardiometabolic II	10	7
Explore 384 Inflammation	12	18
Explore 384 Inflammation II	7	6
Explore 384 Neurology	9	14
Explore 384 Neurology II	10	7
Explore 384 Oncology	6	8
Explore 384 Oncology II	12	8

2.2.2 Intra-assay %CV distribution

Olink Panel	<5%	≥5-<10%	≥10-<15%	≥15%	N/A*
Explore 384 Cardiometabolic	7	5	1	29	327
Explore 384 Cardiometabolic II	98	55	37	44	133
Explore 384 Inflammation	2	4	1	6	355
Explore 384 Inflammation II	145	68	24	30	102
Explore 384 Neurology	4	10	6	26	321
Explore 384 Neurology II	62	46	23	37	199
Explore 384 Oncology	5	8	3	2	350
Explore 384 Oncology II	40	47	38	37	206

*Assays where CV is not possible to calculate

2.2.3 Inter-assay %CV distribution

Olink Panel	<10%	≥10-<20%	≥20-<30%	≥30%	N/A*
Explore 384 Cardiometabolic	19	10	22	19	299
Explore 384 Cardiometabolic II	211	42	11	4	99
Explore 384 Inflammation	9	2	6	4	347

Explore 384 Inflammation II	241	34	6	2	86
Explore 384 Neurology	21	23	11	2	310
Explore 384 Neurology II	165	35	9	3	155
Explore 384 Oncology	13	5	0	0	350
Explore 384 Oncology II	157	35	14	2	160

*Assays where CV is not possible to calculate

3. Protein detection results

3.1 Number of proteins detected in >50% of the samples

Olink Panel	No. of detected proteins / Total no. of proteins	Detected proteins (%)	Expected detectability in EDTA plasma* (%)
Explore 384 Cardiometabolic	23 / 369	6	N/A
Explore 384 Cardiometabolic II	208 / 367	57	N/A
Explore 384 Inflammation	5 / 368	1	N/A
Explore 384 Inflammation II	264 / 369	72	N/A
Explore 384 Neurology	1 / 367	0	N/A
Explore 384 Neurology II	155 / 367	42	N/A
Explore 384 Oncology	1 / 368	0	N/A
Explore 384 Oncology II	134 / 368	36	N/A

*The expected detectability is based on EDTA plasma from healthy donors. These values are intended as guidelines only and protein levels are expected to vary depending on different pathological conditions, sample matrices, or sample preparation methods.

3.2 Data output

Data is presented as NPX (Normalized Protein eXpression) values. NPX is Olink's relative protein quantification unit on log2 scale. NPX values are calculated from the number of matched counts, using NGS (Next Generation Sequencing) as readout. The NPX values are presented in a separate results file delivered in the MyData cloud. Data values for measurements below limit of detection (LOD) are reported for all samples.