

Quartet Data Portal User Guide for Proteomic Quality Assessment Report

1. Preparation

QDP Address	https://chinese-quartet.org/
OSSUtil	https://docs.chinese-quartet.org/tools/ossutil/
Input files	The file format (suffix) should be .csv.

2. Log on to QDP

2.1 QDP account

1) If you have a request for the reference materials, please go to <http://chinese-quartet.org/#/materials> to request the reference materials. The Quartet team will contact you for further confirming your information and send you a registration email.

Reference Materials

Quartet multi-omics reference materials of DNA, RNA, proteins, and metabolites were simultaneously manufactured from the same batch of cultured immortalized B-lymphoblastoid cell line of a specific family member of a Chinese Quartet family from Fudan Taizhou Cohort, including father (F7), mother (M8), and two monozygotic twin daughters (D5 and D6). The Quartet Reference Materials suite is intended for quality control and performance assessment of each omics profiling. It can measure and mitigate technical variation, enabling more accurate data integration in large cohort studies. The Quartet multi-omics reference materials are publicly available and accessible. The recipients of the Reference Materials are highly encouraged to share their data with Fudan University through the Quartet Data Portal in order for us to improve the reference datasets and to better serve the community.

Request DNA Materials

>>> Download the Specification <<<

Name of DNA Reference Material	Color
FDU_Quartet_DNA_D5_20171028	Blue
FDU_Quartet_DNA_D6_20171028	Green
FDU_Quartet_DNA_F7_20171028	Yellow
FDU_Quartet_DNA_M8_20171028	Red

Each vial contains approximately 10 µg of genomic DNA (200 ng/µL, 50 µL) in TE buffer (10 mM TRIS, 1 mM EDTA, pH 8.0)

Request RNA Materials

>>> Download the Specification <<<

Name of RNA Reference Material	Color
FDU_Quartet_RNA_D5_20171028	Blue
FDU_Quartet_RNA_D6_20171028	Green
FDU_Quartet_RNA_F7_20171028	Yellow
FDU_Quartet_RNA_M8_20171028	Red

Each vial contains approximately 5 µg of total RNA (~520 ng/µL, 10 µL), and the RNA is in water. miRNA and other small RNA are retained.

Request Protein Materials

>>> Download the Specification <<<

Name of Protein Reference Material	Color
FDU_Quartet_Protein_D5_20171028	Blue
FDU_Quartet_Protein_D6_20171028	Green
FDU_Quartet_Protein_F7_20171028	Yellow
FDU_Quartet_Protein_M8_20171028	Red

Each vial contains approximately 10 µg of dried, tryptic peptide mixtures. Four labeled peptides are spiked in at different weight ratios as external controls.

Request Metabolite Materials

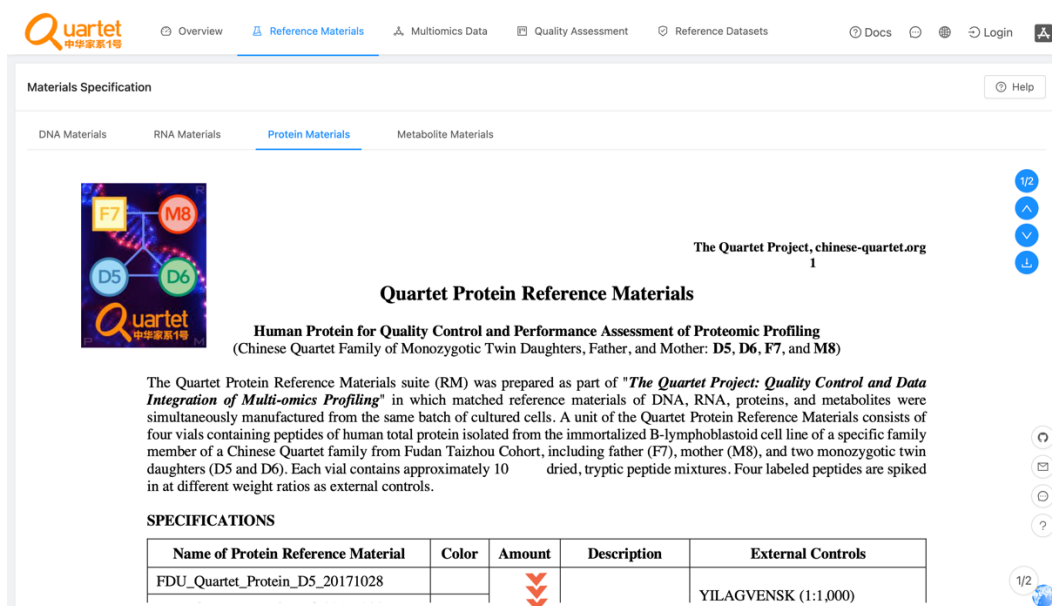
>>> Download the Specification <<<

Name of Metabolite Reference Material	Color
FDU_Quartet_Metabolite_D5_20171028	Blue
FDU_Quartet_Metabolite_D6_20171028	Green
FDU_Quartet_Metabolite_F7_20171028	Yellow
FDU_Quartet_Metabolite_M8_20171028	Red

Each vial contains dried cell extracts from approximately 106 cells using methanol / water (6/1) solution. Eleven external controls are spiked in at known amounts.

2) You can download the specification file by clicking *Download the Specification*.

3) For preview the specification, please drop down and click *Protein Materials*.



Materials Specification

DNA Materials RNA Materials **Protein Materials** Metabolite Materials

The Quartet Project, chinese-quartet.org

Quartet Protein Reference Materials

Human Protein for Quality Control and Performance Assessment of Proteomic Profiling
(Chinese Quartet Family of Monozygotic Twin Daughters, Father, and Mother: D5, D6, F7, and M8)

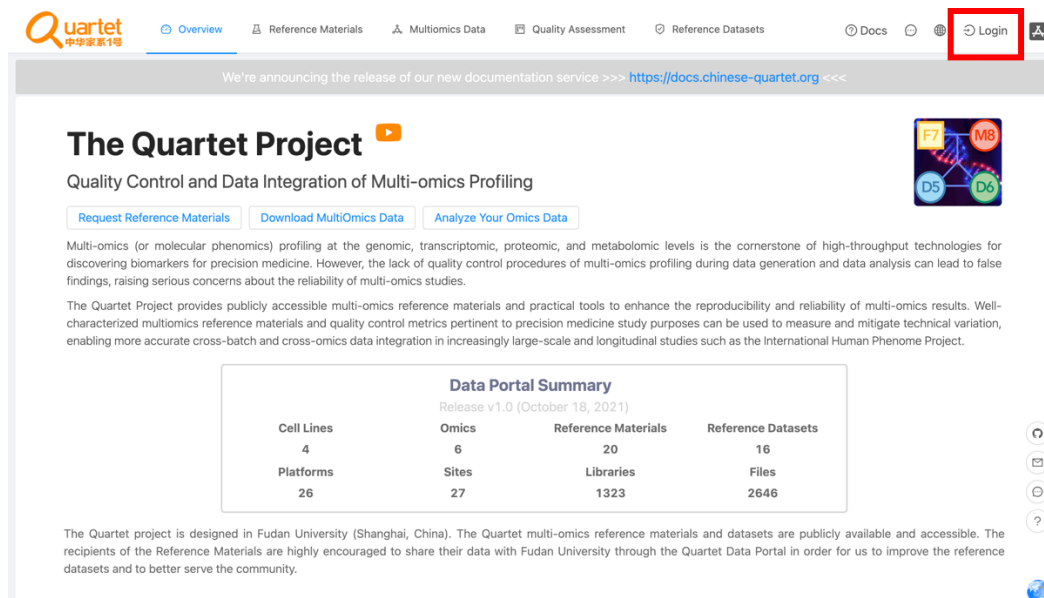
The Quartet Protein Reference Materials suite (RM) was prepared as part of "*The Quartet Project: Quality Control and Data Integration of Multi-omics Profiling*" in which matched reference materials of DNA, RNA, proteins, and metabolites were simultaneously manufactured from the same batch of cultured cells. A unit of the Quartet Protein Reference Materials consists of four vials containing peptides of human total protein isolated from the immortalized B-lymphoblastoid cell line of a specific family member of a Chinese Quartet family from Fudan Taizhou Cohort, including father (F7), mother (M8), and two monozygotic twin daughters (D5 and D6). Each vial contains approximately 10 dried, tryptic peptide mixtures. Four labeled peptides are spiked in at different weight ratios as external controls.

SPECIFICATIONS

Name of Protein Reference Material	Color	Amount	Description	External Controls
FDU_Quartet_Protein_D5_20171028				YILAGVENS (1:1,000)

3) If you do not have a request for the reference materials, please send an email to quartet@fudan.edu.cn for a QDP account.

2.2 Login



Quartet 中华家系1号

Overview Reference Materials Multiomics Data Quality Assessment Reference Datasets Docs Login

We're announcing the release of our new documentation service >>> <https://docs.chinese-quartet.org> <<<

The Quartet Project

Quality Control and Data Integration of Multi-omics Profiling

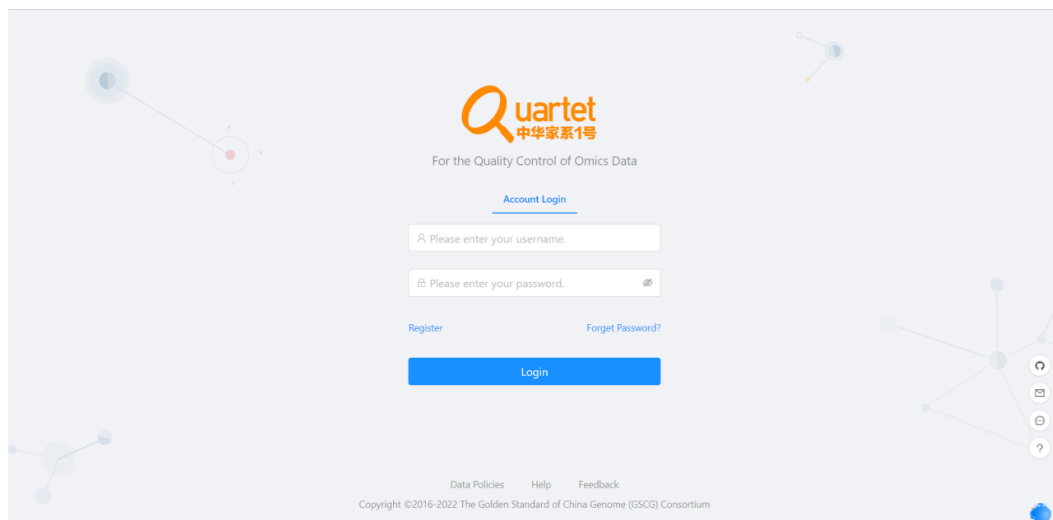
[Request Reference Materials](#) [Download MultiOmics Data](#) [Analyze Your Omics Data](#)

Multi-omics (or molecular phenomics) profiling at the genomic, transcriptomic, proteomic, and metabolomic levels is the cornerstone of high-throughput technologies for discovering biomarkers for precision medicine. However, the lack of quality control procedures of multi-omics profiling during data generation and data analysis can lead to false findings, raising serious concerns about the reliability of multi-omics studies.

The Quartet Project provides publicly accessible multi-omics reference materials and practical tools to enhance the reproducibility and reliability of multi-omics results. Well-characterized multiomics reference materials and quality control metrics pertinent to precision medicine study purposes can be used to measure and mitigate technical variation, enabling more accurate cross-batch and cross-omics data integration in increasingly large-scale and longitudinal studies such as the International Human Phenome Project.

Data Portal Summary			
Release v1.0 (October 18, 2021)			
Cell Lines	Omics	Reference Materials	Reference Datasets
4	6	20	16
Platforms	Sites	Libraries	Files
26	27	1323	2646

The Quartet project is designed in Fudan University (Shanghai, China). The Quartet multi-omics reference materials and datasets are publicly available and accessible. The recipients of the Reference Materials are highly encouraged to share their data with Fudan University through the Quartet Data Portal in order for us to improve the reference datasets and to better serve the community.



2.3 Select *Quality Assessment* > *QC Apps*.

We're announcing the release of our new document: [<<<](https://docs.chinese-quartet.org)

The Quartet Project

Quality Control and Data Integration of Multi-omics Profiling

[Request Reference Materials](#) [Download MultiOmics Data](#) [Analyze Your Omics Data](#)

Multi-omics (or molecular phenomics) profiling at the genomic, transcriptomic, proteomic, and metabolomic levels is the cornerstone of high-throughput technologies for discovering biomarkers for precision medicine. However, the lack of quality control procedures of multi-omics profiling during data generation and data analysis can lead to false findings, raising serious concerns about the reliability of multi-omics studies.

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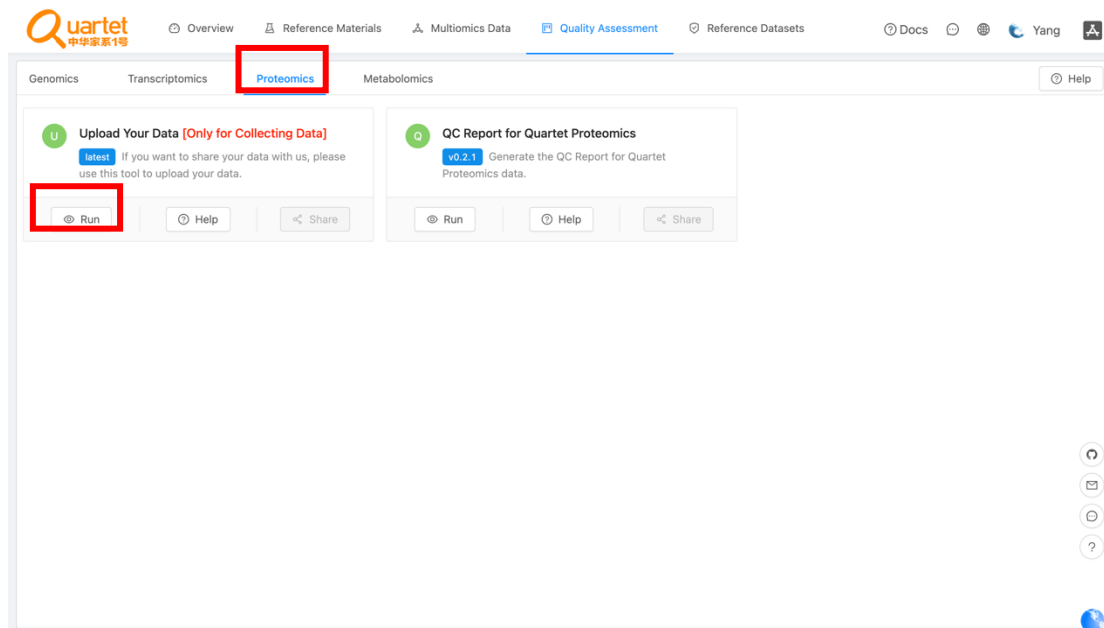
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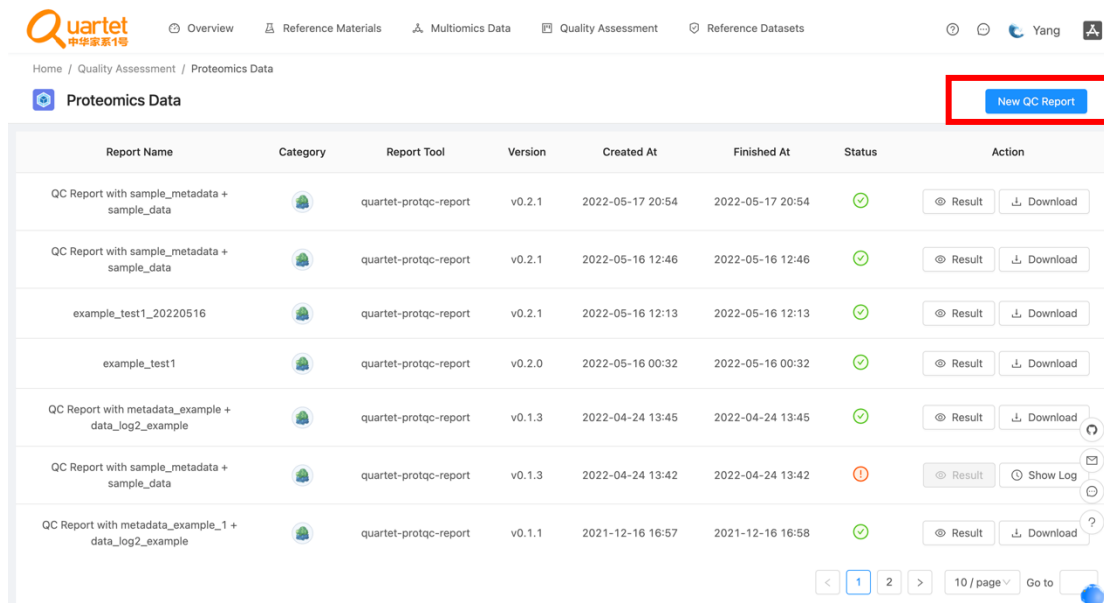
<https://chinese-quartet.org/seq-flow/app-store>

3. Run QC Report

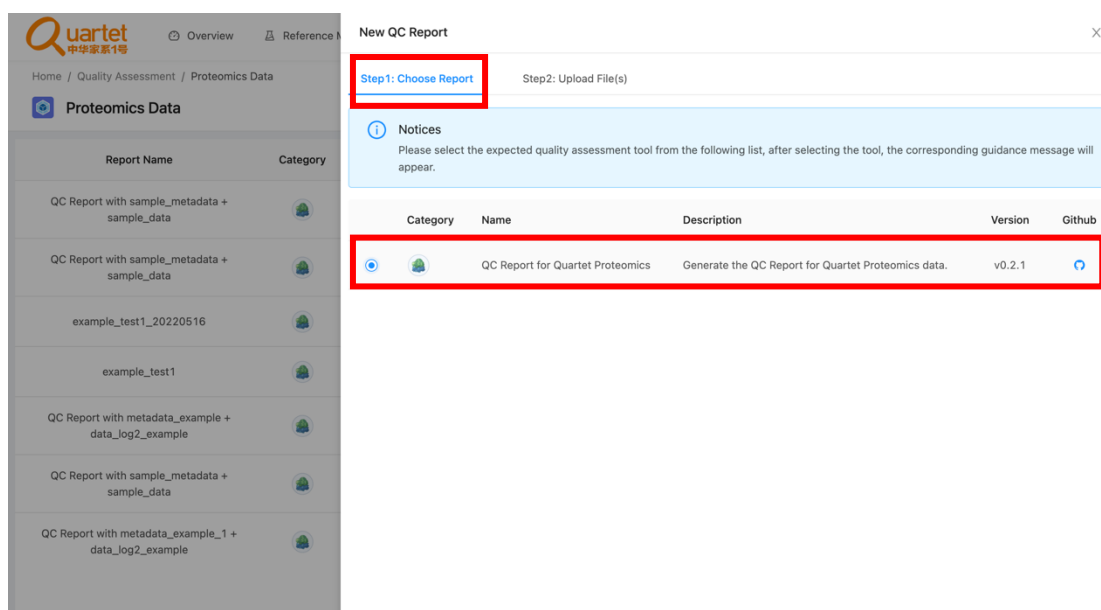
3.1 Select *Proteomics* > *Run*.



3.2 Click *New QC Report*.

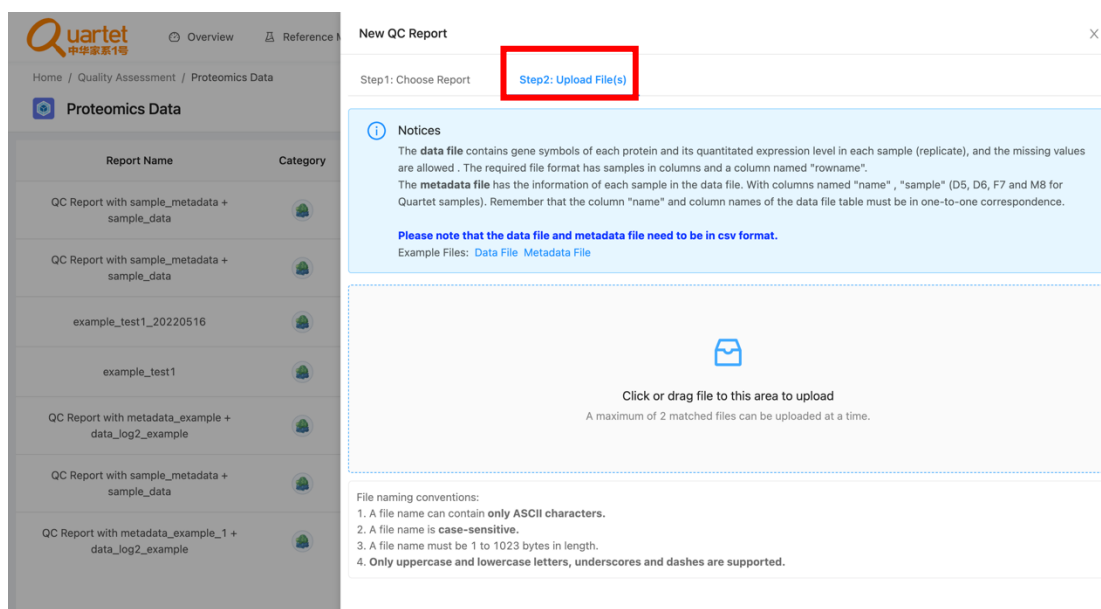


3.3 Select Step1: Choose Report > QC Report for Quartet Proteomics.



3.4 Select Step2: Upload File(s) > QC Report for Quartet Proteomics.

- 1) For details of the fixed format of the data file and the metadata file, please refer to https://docs.chinese-quartet.org/data_pipelines/proteomics/qc_report/.
- 2) To ensure the data file and the metadata file are matched, please drag or click files simultaneously into the uploading area.



3.5 After uploading the tested files, select *Step3: Parameters & Submit*. Fill in the required information and click *Submit*.

Quartet 中华家1号

Home / Quality Assessment / Proteomics Data

Proteomics Data

New QC Report

Step1: Choose Report Step2: Upload File(s) **Step3: Parameters & Submit**

Notices
Quality Assessment of a Quartet proteomic profiling dataset is based on built-in biological differences of the samples and consistency with the reference dataset at relative quantitation levels. The former is scored as an Signal-to-Noise Ratio (SNR) and displayed in a PCA scatterplot, and the latter is scored as Pearson correlation to the reference dataset and displayed in a scatterplot, in which a strict filter criteria was applied (features with p.adj<0.05 in at least 4 batches were kept).

* Report Name

* Which Report? quartet-protqc-report

* Data File
Please select your data file

* Metadata File
Please select your metadata file

Description
Please input the description!

Cancel **Submit**

3.6 Then you can preview or download your QC report by clicking *Result* or *Download* respectively.

Quartet 中华家1号

Home / Quality Assessment / Proteomics Data

Proteomics Data New QC Report

Report Name	Category	Report Tool	Version	Created At	Finished At	Status	Action
Quartet Protein QC Report for test20221008		quartet-protqc-report	v0.2.1	2022-10-08 10:24	2022-10-08 10:24	✓	Result Download
QC Report with sample_metadata + sample_data		quartet-protqc-report	v0.2.1	2022-05-17 20:54	2022-05-17 20:54	✓	Result Download
QC Report with sample_metadata + sample_data		quartet-protqc-report	v0.2.1	2022-05-16 12:46	2022-05-16 12:46	✓	Result Download
example_test1_20220516		quartet-protqc-report	v0.2.1	2022-05-16 12:13	2022-05-16 12:13	✓	Result Download
example_test1		quartet-protqc-report	v0.2.0	2022-05-16 00:32	2022-05-16 00:32	✓	Result Download
QC Report with metadata_example + data_log2_example		quartet-protqc-report	v0.1.3	2022-04-24 13:45	2022-04-24 13:45	✓	Result Download
QC Report with sample_metadata + sample_data		quartet-protqc-report	v0.1.3	2022-04-24 13:42	2022-04-24 13:42	⚠	Result Show Log

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