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

Reference Materials								⑦ Help	þ
nember of a Chinese Quartet family f ontrol and performance assessment	rom Fudan Ta of each omic cessible. The	izhou Cohort, including father (F7), moth s profiling. It can measure and mitigate recipients of the Reference Materials	er (M8), and t technical varia	anufactured from the same batch of cult wo monozygotic twin daughters (D5 and ation, enabling more accurate data integ couraged to share their data with Fuda	D6). The Qua ration in large	artet Reference Materials : e cohort studies. The Qua	suite is intende Irtet multi-omic	d for qua s referer	ality nce
Request DNA Materials		Request RNA Materials		Request Protein Materials		Request Metra	abolite Materia	als	
>>> Download the Specificatio	n <<<	>>> Download the Specification	n <<<	>>> Download the Specification	~~~	>>> Download th	e Specification	~~~	
Name of DNA Reference Material	Color	Name of RNA Reference Material	Color	Name of Protein Reference Material	Color	Name of Metabolite Refe	rence Material	Color	r
FDU_Quartet_DNA_D5_20171028	•	FDU_Quartet_RNA_D5_20171028	•	FDU_Quartet_Protein_D5_20171028	•	FDU_Quartet_Metabolite	_D5_20171028	•	
FDU_Quartet_DNA_D6_20171028	•	FDU_Quartet_RNA_D6_20171028	•	FDU_Quartet_Protein_D6_20171028	•	FDU_Quartet_Metabolite	_D6_20171028	•	0
FDU_Quartet_DNA_F7_20171028	•	FDU_Quartet_RNA_F7_20171028	•	FDU_Quartet_Protein_F7_20171028	•	FDU_Quartet_Metabolite	_F7_20171028	•	(1
FDU_Quartet_DNA_M8_20171028	•	FDU_Quartet_RNA_M8_20171028	•	FDU_Quartet_Protein_M8_20171028	•	FDU_Quartet_Metabolite	_M8_20171028	•	6
	10 µg of	Each vial contains approximately 5	ug of total	Each vial contains approximately	10 µg of	Each vial contains of	fried cell extra	acts from	ļ

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

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

	Overview	A Reference Materials	,å, Multiomics Data	🗉 Quali	ty Assessment	🕑 Ref	ference Datasets	⑦ Docs	•	€ Login	A
Materials Specificatio	on									() H	elp
DNA Materials	RNA Materials	Protein Materials	Metabolite Materials	3							
	The Quartet Pr Integration of simultaneously four vials conta member of a C daughters (D5 a	Human Protein for Chinese Quartet Family otein Reference Materi Multi-omics Profiling manufactured from the ining peptides of humar hinese Quartet family fr and D6). Each vial conta weight ratios as external	of Monozygotic T als suite (RM) wa: " in which matcher same batch of cult n total protein isolar om Fudan Taizhoo ains approximately	and Perform win Daugh s prepared a ed reference tured cells. ted from the a Cohort, in	nance Assess ters, Father, a as part of "The e materials of A unit of the e immortalized cluding father	terials ment of nd Moth <i>he Quar</i> f DNA, Quartet d B-lymp (F7), m	Proteomic Profiling her: D5, D6, F7, and Mi tet Project: Quality Co RNA, proteins, and n Protein Reference Mat phoblastoid cell line of a	8) pontrol and D netabolites w erials consists a specific fan onozygotic tw	ata ere s of hily win		
		rotein Reference Mate	erial Color	Amount	Descript	ion	External Co	ntuala			Ċ
	rame of r	rotem kerefence Mate		Amount	Descript	1011	External Co	1111015			

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

	We'			entation service >>> https://do	ocs.chinese-quartet.org <			
The Q	uartet	Project					F	7 MB
		ta Integration of Mu	ulti-omics Profil	ing			D	-00
	nce Materials	Download MultiOmics Da	ata Analyze Your (Omics Data				
discovering biom findings, raising s	nolecular pheno arkers for precisi erious concerns	on medicine. However, the I about the reliability of multi-	lack of quality control p omics studies.	roteomic, and metabolomic leve procedures of multi-omics profilin	ng during data generation ar	nd data analy	/sis can	lead to false
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	Please enter your password. Register Forget	Ø et Password?	
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Cop	Data Policies Help Feedbar yright ©2016-2022 The Golden Standard of China Genc		

2.3 Select Quality Assessment > QC Apps.

		of our new docun	器 QC Apps	tps://docs.chinese-quartet.org			
	_	6	QC Report History				
The Quarte	et Project 🞴		1. All Your Data			F7	M8
Quality Control and D	ata Integration of Mult	ti-omics Profili	ng			05	D6
	Describe data Mandes Dete	Analyze Your O	mine Data				
discovering biomarkers for prec findings, raising serious concerr The Quartet Project provides p characterized multiomics refere	ision medicine. However, the lac ns about the reliability of multi-om ublicly accessible multi-omics re nce materials and quality control	ic, transcriptomic, pr k of quality control pr nics studies. eference materials ar I metrics pertinent to	roteomic, and metabolo rocedures of multi-omic nd practical tools to en precision medicine stud	profiling during data generation is profiling during data generation hance the reproducibility and reli- dy purposes can be used to meas linal studies such as the Internation	and data analysis ability of multi-omi ure and mitigate ter	can lead to ics results.	to fals s. Well ariatior
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https://chinese-quartet.org/seq-flow/app-store

3. Run QC Report

3.1 Select Proteomics > Run.

Quartet O Overview A Reference	Materials & Multionics Data	🕜 Docs 💬 🛞 🍆 Yang 🗛
Genomics Transcriptomics Proteomics	Metabolomics	③ Help
Upload Your Data [Only for Collecting Data] Intest If you want to share your data with us, plea use this tool to upload your data.	QC Report for Quartet Proteomics vo2.1 Generate the QC Report for Quartet Proteomics data.	
💿 Run 💿 Help	e 💿 Run 💿 Help << Share	
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3.2 Click New QC Report.

ne / Quality Assessment / Proteomics D Proteomics Data	Jata						New QC Report
Report Name	Category	Report Tool	Version	Created At	Finished At	Status	Action
QC Report with sample_metadata + sample_data	۲	quartet-protqc-report	v0.2.1	2022-05-17 20:54	2022-05-17 20:54	\oslash	Result Download
QC Report with sample_metadata + sample_data	۲	quartet-protqc-report	v0.2.1	2022-05-16 12:46	2022-05-16 12:46	\odot	Result L Download
example_test1_20220516	۲	quartet-protqc-report	v0.2.1	2022-05-16 12:13	2022-05-16 12:13	\odot	© Result L Download
example_test1	۲	quartet-protqc-report	v0.2.0	2022-05-16 00:32	2022-05-16 00:32	\odot	© Result L Download
QC Report with metadata_example + data_log2_example	۲	quartet-protqc-report	v0.1.3	2022-04-24 13:45	2022-04-24 13:45	\odot	Result L Download
QC Report with sample_metadata + sample_data	۲	quartet-protqc-report	v0.1.3	2022-04-24 13:42	2022-04-24 13:42	()	Result Show Log
C Report with metadata_example_1 + data_log2_example	۲	quartet-protqc-report	v0.1.1	2021-12-16 16:57	2021-12-16 16:58	\odot	

Quartet ② Overview	A Reference N	New	QC Report				×
Home / Quality Assessment / Proteomics E	Data	Step1	I: Choose Repor	t Step2: Upload File(s)			
Proteomics Data		(i)	Notices				
Report Name	Category		Please select 1 appear.	the expected quality assessment tool fr	om the following list, after selecting the tool, the correspondi	ng guidance me	ssage will
QC Report with sample_metadata + sample_data	۲		Category	Name	Description	Version	Github
QC Report with sample_metadata + sample_data	۲	۲	۲	QC Report for Quartet Proteomics	Generate the QC Report for Quartet Proteomics data.	v0.2.1	0
example_test1_20220516	۲						
example_test1	۲						
QC Report with metadata_example + data_log2_example	۲						
QC Report with sample_metadata + sample_data	۲						
QC Report with metadata_example_1 + data_log2_example	۲						

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.

Quartet ② Overview	A Reference M	New QC Report	×
Home / Quality Assessment / Proteomics	Data	Step1: Choose Report Step2: Upload File(s)	
Proteomics Data			
Report Name	Category	(i) Notices The data file contains gene symbols of each protein and its quantitated expression level in each sample (replicate), and the missing values are allowed. The required file format has samples in columns and a column named "rowname".	
QC Report with sample_metadata + sample_data	۲	The metadata file has the information of each sample in the data file. With columns named "name", "sample" (D5, D6, F7 and M8 for Quartet samples). Remember that the column "name" and column names of the data file table must be in one-to-one correspondence.	
QC Report with sample_metadata + sample_data	۲	Example Files: Data File Metadata File	
example_test1_20220516	۲		
example_test1	۲	Click or drag file to this area to upload	
QC Report with metadata_example + data_log2_example	۲	A maximum of 2 matched files can be uploaded at a time.	
QC Report with sample_metadata + sample_data	۲	File naming conventions: 1. A file name can contain only ASCII characters.	
QC Report with metadata_example_1 + data_log2_example	۲	1. A file name can contain only ASUL fortracters. 2. A file name must be 1 to 1023 bytes in length. 3. A file name must be 1 to 1023 bytes in length. 4. Only uppercase and lowercase letters, underscores and dashes are supported.	

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

Quartet @ Overview	A Reference M	New QC Report	×
Home / Quality Assessment / Proteomics D	ata	Step 1: Choose Report Step 2: Upload File(s) Step 3: Parameters & Submit	
Proteomics Data		(i) Notices	
Report Name	Category	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	1
QC Report with sample_metadata + sample_data	۲	criteria was applied (features with p.adj<0.05 in at least 4 batches were kept).	
QC Report with sample_metadata + sample_data	۲	* Report Name * Which Report? quartet-protqc-report	
example_test1_20220516	۲	* Data File * Metadata File Please select your metadata file * Please select your metadata file	~
example_test1	۲	Description	
QC Report with metadata_example + data_log2_example	۲	Please input the description!	
QC Report with sample_metadata + sample_data	۲		
QC Report with metadata_example_1 + data_log2_example	۲		
		Cancel Subr	nit

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

Proteomics Data								New QC Report
Report Name	Category	Report Tool	Version	Created At	Finished At	Status		Action
Quartet Protein QC Report for test20221008	۲	quartet-protqc-report	v0.2.1	2022-10-08 10:24	2022-10-08 10:24	\oslash	Result	⊥ Download
QC Report with sample_metadata + sample_data	۲	quartet-protqc-report	v0.2.1	2022-05-17 20:54	2022-05-17 20:54	\oslash	Result	는 Download
QC Report with sample_metadata + sample_data	۲	quartet-protqc-report	v0.2.1	2022-05-16 12:46	2022-05-16 12:46	\odot	Result	소 Download
example_test1_20220516	۲	quartet-protqc-report	v0.2.1	2022-05-16 12:13	2022-05-16 12:13	\odot	Result	止 Download
example_test1	۲	quartet-protqc-report	v0.2.0	2022-05-16 00:32	2022-05-16 00:32	\odot	Result	⊥ Download
QC Report with metadata_example + data_log2_example	۲	quartet-protqc-report	v0.1.3	2022-04-24 13:45	2022-04-24 13:45	\oslash	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