

## Quantifluor\_Data\_Flow.R

Description: This script has 2 methods related to the quantifluor: import or export. A user has the ability to select where they want to create a file that organizes and prepares a file for import into the quantifluor (generate a sample sheet for the quantifluor) or whether they want to take the results of the quantifluor and export the results out into a populated excel spreadsheet.

!IMPORTANT NOTE: Windows OS does not allow the following characters to be present in the filename when using read-in functions on scripts: Alt+0 through Alt+32 or the following characters: \\ \ / [ ] : | < > + ; = . ? "

### *Import method:*

files required from user: qc/extraction log

expected output: .xlsx sample sheet to be used as input into quantifluor

errors thrown:

1. Warning to standard out if < 90 samples are in sample sheet

### *Export method:*

files required from user: qc/extraction log to populate and results output from quantifluor assay

expected output: populates qc/extraction log with results from quantifluor assay

errors thrown:

1. In quantifluor notes of qc/extraction log if:
  - (a) "OOR high" if a ">" exists in mean column
  - (b) "below limit for infinium" if mean column <3.0
  - (c) "count is 0 or 1" if Count column is 0 or 1
  - (d) "CV error" if a "!" exists in the CV column
  - (e) "failed extraction" if mean column is literally <0.000
  - (f) if a particular result exhibits more than one of the above errors, all errors will be appended into the notes
2. Warning written to standard out if there are missing wells or samples from the quantifluor results file

## **infinium\_file\_creations.R**

Description: This script has 3 methods related to the infinium files: log, manifest, or update. The log method can take one to several extraction/qc logs (comma-separated if multiple logs are input) and REDCap information to generate and one Infinium batch log file (.xlsx). The manifest method takes and infinium batch log (.xlsx) and generates an infinium sample sheet formatted to the correct infinium specifications. The update method is used to update REDCap information of an already existing Infinium batch log file (.xlsx).

It is important that this file “R-7\_Infinium\_batch\_log\_template.xlsx” is in the same directory as the infinium\_file\_creations.R script since it is using the file as a template to create .xlsx files

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### *log method:*

files required from user: input name of extraction/qc log (.xlsx) file (comma-separated if list of them) and a REDCap export xlsx file

expected output: xlsx file that follows format of Infinium batch log file; one file is generated no matter how many extraction/qc logs are input – all inputs are concatenated together into one batch file

#### errors thrown:

1. Warning and Error to standard out if duplicate BTIDs exist in REDCap file
2. Error to standard out if multiple of 90 BTIDs/samples does not exist

### *manifest method:*

files required from user: infinium batch log xlsx file

expected output: outputs xlsx file that is formatted to a an infinium sample sheet

#### errors thrown:

1. Warning to standard out if total samples in samples sheet does not equal 96 or 192

### *update method:*

files required from user: name of an already existing .xlsx infinium batch log file that requires updating and a REDCap export xlsx file

expected output: xlsx file that follow format of Infinium batch log with updated REDCap information for select wells

#### errors thrown:

1. Error to standard out if duplicate BTIDs exist in batch log file and/or REDCap file