DesignStudio™ Microarray Assay Designer Software

Customer Release Notes

v.2.2.2

September 17, 2024

Introduction

DesignStudio Microarray Assay Designer is a web-based software tool that allows customers to design custom and semi-custom Infinium™ BeadChips. Highlights include:

POWERFUL CUSTOM GENOTYPING ARRAYS

Design custom panels to support tailored research applications. Choose from multiple BeadChip formats and supported species to suit the project objectives.

SOPHISTICATED DESIGN TOOLS

Supports successful probe design for single-nucleotide polymorphisms (SNPs) and insertions/deletions (indels) by providing predicted success and Infinium validation status.

These Release Notes detail the key features and changes to software components for the release of DesignStudio Microarray Assay Designer v.2.2.2. As a web application, the new release affects all customers. For information on how to use the system, see the DesignStudio Microarray Assay Designer Online Help. DesignStudio is an online tool for creating custom and semi-custom Infinium BeadChips, including features such as:

- Login using MyIllumina account
- Supports creation of custom and semi-custom Infinium BeadChips in the following assay formats:
  - HTS
  - XT
  - EX-24
  - EX-48
- Allows design of semi-custom content based on popular catalog array backbones
- Designs one to four species on a single array for XT BeadChips
- Designs BeadChips for human and agricultural species
- View project status
- Informs on product criteria, including:
  - Minimum and maximum number of markers per chip
  - Minimum number of chips that need to be ordered
  - Manufacturing conversion rate
- Provides standard inputs for custom designs
- Generates designs using:
  - rsIDs from dbSNP (human only)
  - Genomic coordinates (human only)
  - Gene names (human only)
  - Existing Illumina IDs (ILMN IDS)
  - Flanking sequences and alleles
  - Previous score file
- Alerts to potential issues with submitted design
- Outputs list of input targets that were unsuccessful
- Output file containing the sequence of each design and predicted success

NEW FEATURES:

- None

FIXED ISSUES:

- Fixed issue impacting Infinium I indels for specific probe designs. These specific designs and associated Illumina IDs have been removed from the Illumina ID database.

KNOWN ISSUES:

- Non-specific failures occur when:
  - Loci names include two dashes ("--") in the input file
  - A M or MT chromosome designation is used for equine as species
  - Submitting sequence files with certain formatting errors. The workflow terminates without allowing access to the error file.
- When using an existing design file, a dropdown exists but the stand type cannot be changed

Release History

Revision	Release Reference	Originator	Description of Change
00	CN 1112955	L. Mastro	Initial Release