LIBRARY PREP AND TARGET ENRICHMENT SITE PREPARATION GUIDE

ORGANIZATION NAME: _____

SCOPE

LIBRARY PREPARATION

- ☐ EF 1.0
- ☐ EF 2.0
- ☐ EM-Seq
- ☐ cfDNA
- ☐ RNA ☐ FFPE repair ☐ rRNA and Globin Depletion
- ☐ Mechanical Frag
- ☐ N/A (capture only)

ADAPTER TYPE

- ☐ Combinatorial Dual Index (CDI)
- ☐ Universal Dual Index (UDI)
- ☐ UDI+UMI (Unique Molecular Identifier/ Index (UMI))
- ☐ N/A (capture only)

DNA INPUT INTO LIBRARY PREP

- ☐ 1-50 ng
- ☐ 50–100 ng
- ☐ 100-200 ng
- ☐ >200 ng

SAMPLE TYPE

☐ gDNA ☐ cfDNA ☐ FFPE ☐ RNA

NUMBER OF SAMPLES _____

PLEXITY FOR HYB _____

CONTROL SAMPLE _____

HYBRIDIZATION

- ☐ Std Hyb v1 ☐ Fast _____ *hyb time* _____ *wash 1 temperature*
- ☐ Std Hyb v2

- ☐ Speed Vac
- ☐ Bead dry down (not for methylation)

PANEL SIZE

- ☐ <50 kb
- ☐ 50–100 kb
- ☐ 100–500 kb
- ☐ 500–1,000 kb
- ☐ 1–10 Mb
- ☐ 10–50 Mb *(exome)*
- ☐ 50–100 Mb
- ☐ >100 Mb

DESIGN ID

TE- _____

REQUIREMENTS

SAMPLES

- ☐ Use Qubit / Fluorescence Method to quantify samples
- ☐ Make dilutions of the samples
- ☐ Include 1–2 control samples to share with Twist
- ☐ Calibrate PCR machines, pipettes, heat blocks (70C°/48C° as indicated in Twist protocol)
- ☐ Reserve PCR machine for time indicated in Twist protocol

LIBRARY PREP

Twist Consumables:

- ☐ Twist Library Prep Kit
- ☐ Twist Index Adapter Kit

Equipment:

- ☐ Filtered pipette tips
- ☐ Multichannel pipettes
- ☐ Table top microcentrifuge (8 tube strips compatible and 1.5 mL tube compatible)
- ☐ Thermal cycler (preferably with programmable heated lid), 0.2 ml PCR tubes compatible
- ☐ Magnetic separation rack 96-well type
- ☐ Thin-walled 0.2 ml PCR tubes strip tubes or 96-well plate
- ☐ Vortex mixer

TARGET ENRICHMENT

Twist Consumables:

- ☐ Twist Target Enrichment Kit (binding and purification beads, hyb and wash kit, universal blockers)
- ☐ Twist Panel

Equipment:

- ☐ Filtered pipette tips
- ☐ Multichannel and single-channel pipettes
- ☐ Table top microcentrifuge (8 tube strips compatible and 1.5 mL tube compatible)
- ☐ Thermal cycler (preferably with programmable heated lid), 0.2 ml PCR tubes compatible
- ☐ Magnetic separation rack 96-well type
- ☐ Magnetic separation rack 1.5 ml tube compatible
- ☐ Heat Block Dry Bath 1.5 ml tube compatible or similar
- ☐ Qubit® Fluorometer and High Sensitivity reagents kit
- ☐ Digital electrophoresis system (e.g. Agilent Bioanalyzer High Sensitivity chips or similar)
- ☐ Vacuum DNA Concentrator (e.g. Speedvac™ or similar)*
- ☐ Ice or cold block
- ☐ 1.5 mL tube rotator, rocker, or shaker

** If not using bead based dry down*