# LiquidPlex™ {{ panel\_name }}

## Description

The LiquidPlex {{ panel\_name }} panel is an optimized, balanced pool of gene-specific primer (GSP) oligonucleotides that is used in conjunction with LiquidPlex -HS reagents and molecular barcode (MBC) adapters to produce targeted NGS libraries. This product insert should be used in conjunction with LiquidPlex protocol for Illumina® (PRO027).

## Contents

|  |  |  |
| --- | --- | --- |
| Description | Part number | Storage conditions |
| LiquidPlex™ {{ panel\_name }} GSP1 - {{ num\_reactions }} reactions | {{ prefix }}{{ design\_id }}{{ ‘%02d’ % num\_reactions }}1 | -20°C ± 10°C |
| LiquidPlex™ {{ panel\_name }} GSP2 - {{ num\_reactions }} reactions | {{ prefix }}{{ design\_id }}{{ ‘%02d’ % num\_reactions }}2 |

## Required reagent volumes

|  |  |  |  |
| --- | --- | --- | --- |
| Protocol reference | Protocol step | Reagent | Required volume per reaction |
| A | Ligation Step 2 Elution | 5mM NaOH | {{ reagent\_volumes[0] }} μL |
| B | First PCR | LiquidPlex {{ panel\_name }}  GSP1 | {{ reagent\_volumes[1] }} μL |
| C | First PCR | 10mM Tris-HCl pH 8.0 | {{ reagent\_volumes[2] }} μL |
| D | First PCR | Purified PCR1 eluate | {{ reagent\_volumes[3] }} μL |
| E | Second PCR | LiquidPlex {{ panel\_name }}  GSP2 | {{ reagent\_volumes[4] }} μL |

## Recommended PCR cycling

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Step | Temperature (°C) | Time | Cycles |
| First PCR reaction | **1** | 95 | 3 min | 1 |
| **2** | 95 | 30 sec | {{ pcr\_info.pcr\_1\_cycles }} |
| **3** | {{ pcr\_info.pcr\_1\_temp }} | {{ pcr\_info.pcr\_1\_anneal\_time }} min (100% ramp rate) |
| **4** | 72 | 3 min | 1 |
| **5** | 4 | Hold | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Second PCR reaction | **1** | 95 | 3 min | 1 |
| **2** | 95 | 30 sec | {{ pcr\_info.pcr\_2\_cycles }}† |
| **3** | 65 | {{ pcr\_info.pcr\_2\_anneal\_time }} min (100% ramp rate) |
| **4** | 72 | 3 min | 1 |
| **5** | 4 | Hold | 1 |

†The number of PCR2 cycles may be decreased if you regularly experience library yields greater than 200nM.

## Recommended reads and multiplexing

LiquidPlex {{ panel\_name }} libraries should be sequenced to a minimum of **{{ recommended\_reads }}** **reads**. Starting reads depth recommendations for standard profiling may be adjusted to increase panel sensitivity.

## Archer® Analysis settings

Sequencing data should be processed using Archer Analysis (v{{ analysis\_version }} or greater). The LiquidPlex {{ panel\_name }} panel requires selection of the {% if pipelines|length==1 %}***{{ pipelines[0] }}*** pipeline{% elif pipelines|length==2 %}***{{ pipelines[0] }}*** and ***{{ pipelines[1] }}*** pipelines{% else %}{% for pipeline in pipelines %}{% if not loop.last %}***{{ pipeline }}***, {% else %}and ***{{ pipeline }}*** pipelines{% endif %}{% endfor %}{% endif %}, found under the ***cfDNA*** Input Type (see the software user manual for further details on setting up analyses)

Processing of LiquidPlex {{ panel\_name }} libraries requires a one-time upload of the Custom Panel GTF. Files can be obtained by contacting adx-tech-support@invitae.com. Users may optionally add a Targeted Mutations VCF file for targeted SNP/indel detection.

## Limitations of use

**For research use only.** Not for use in diagnostic procedures. Not intended to be used in treatment of animal or human diseases.

Safety data sheets pertaining to this product are available upon request.

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