# Ion Torrent by life COLOR.jpg

# Assay Design Report

|  |  |
| --- | --- |
| Request | WG\_IAD217223 |
| **Author(s)** | Ky Sha |
| Date | 23 September 2021 |

# Goals and Considerations:

* Design coverage for all 580 submitted hotspots in IAD217223, but try to improve coverage for the 10 missed targets that were missed in AmpliSeq.com.
* Number of pools: 1
* Amplicon size range: 125bp-275bp

# Assay Design:

* To increase coverage rate and minimize risk, multiple rounds of tiling/pooling are carried out.
* No SNP under primer for bulk of the design and it is relaxed in later rounds (one SNP is allowed at 5’ half of primers) to increase coverage.
* Stringent primer specificity filters are applied for bulk of the design and the specificity parameters are relaxed in later design rounds to increase coverage.

# Results Summary

|  |  |
| --- | --- |
| **Target coverage** | 576/580 (99.31%) |
| **Number of amplicons** | 537 |

**Notes**

* 4 submitted hotspot targets were not able to be covered due to specificity

*Disclaimer: Deviating from the Ampliseq Designer standard result always bears the risk of lower performance.  We are currently investigating in the lab these types of more lenient designs with higher coverage and some of the results look promising, but caution is advised.*