**Supplemental Table 2**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IGHV Allele** | **Leader1** | **Leader2** | **V Sequence** | **RSS** | **23 bp Spacer** | **Nonamer** |
| IGHV4-34\*01\_S0742 | ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGAT | GGGTCCTGTCC | CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACCTGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCAGGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGG | CTCAGTG | AGGGGAGGTGAGTGTGAGCCCAG | ACAAAAACC |
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