

1 **Supplementary Material**

2 MVA-mIL12 sequence

3

4 Promoter

5 Murine IL12 transgene (p40 linker p35)

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7 AATTGGATCAGCTTTTTTTTTTTTTTTTTTTTGGCATATAAATAAGGTCGAAGCTTAAAA
8 ATTGAAAACTAGTCTAATTTATTGCACGGTCTCGTAAAAATTGAAAACTAGTCTA
9 ATTTATTGCACGGTCTCGTAAAAATTGAAAACTAGTCTAATTTATTGCACGGTCTC
10 GTAAAAATTGAAAACTAGTCTAATTTATTGCACGGTCTGGATCCCGCGACTTCGC
11 CGCCATGTGTCTCCTCAGAAGCTAACCATCTCCTGGTTTGCCATCGTTTTGCTGGTGT
12 CTCCACTCATGGCCATGTGGGAGCTGGAGAAAGACGTTTATGTTGTAGAGGTGGA
13 CTGGACTCCCGATGCCCTGGAGAAACAGTGAACCTCACCTGTGACACGCCTGAA
14 GAAGATGACATCACCTGGACCTCAGACCAGAGACATGGAGTCATAGGCTCTGGAA
15 AGACCCTGACCATCACTGTCAAAGAGTTTCTAGATGCTGGCCAGTACACCTGCCAC
16 AAAGGAGGCGAGACTCTGAGCCACTCACATCTGCTGCTCCACAAGAAGGAAAATG
17 GAATTTGGTCCACTGAAATTTTAAAAAATTTCAAAAACAAGACTTTCCTGAAGTGTG
18 AAGCACCAAATTACTCCGACGGTTCACGTGCTCATGGCTGGTGCAAAGAAACAT
19 GGACTTGAAGTTC AACATCAAGAGCAGTAGCAGTTCCTGACTCTCGGGCAGTG
20 ACATGTGGAATGGCGTCTCTGTCTGCAGAGAAGGTCACACTGGACCAAAGGGACT
21 ATGAGAAGTATTCAGTGTCTGCTGCCAGGAGGATGTCACCTGCCCAACTGCCGAGGA
22 GACCCTGCCATTGAACTGGCGTTGGAAGCACGGCAGCAGAATAAATATGAGAAC
23 TACAGCACCACTTCTTCATCAGGGACATCATCAAACCAGACCCGCCCAAGAACTT
24 GCAGATGAAGCCTTTGAAGAACTCACAGGTGGAGGTCAGCTGGGAGTACCCTGAC
25 TCCTGGAGCACTCCCCATTCTACTTCTCCCTCAAGTTCCTTGTTCGAATCCAGCG
26 CAAGAAAGAAAAGATGAAGGAGACAGAGGAGGGGTGTAACCAGAAAGGTGCGTTC
27 CTCGTAGAGAAGACATCTACCGAAGTCCAATGCAAAGGCGGGAATGTCTGCGTGC
28 AAGCTCAGGATCGCTATTACAATTCCTCGTGCAGCAAGTGGGCATGTGTTCCCTGC
29 AGGGTCCGATCCGGTGGCGGTGGCTCGGGCGGTGGTGGGTGGGTGGCGGCGG
30 ATCTAGGGTCATTCCAGTCTCTGGACCTGCCAGGTGTCTTAGCCAGTCCCGAAACC
31 TGCTGAAGACCACAGATGACATGGTGAAGACGGCCAGAGAAAACTGAAACATTAT
32 TCCTGCACTGCTGAAGACATCGATCATGAAGACATCACACGGGACCAAACCAGCA
33 CATTGAAGACCTGTTTACCCTGGAACACACAAGAACGAGAGTTGCCTGGCTACT
34 AGAGAGACTTCTTCCACAACAAGAGGGAGCTGCCTGCCCCACAGAAGACGTCTT
35 TGATGATGACCCTGTGCCTTGGTAGCATCTATGAGGACTTGAAGATGTACCAGACA
36 GAGTTCCAGGCCATCAACGCAGCACTTCAGAATCACAAACATCAGCAGATCATTCT
37 AGACAAGGGAATGCTGGTGGCCATCGATGAGCTGATGCAGTCTCTGAATCATAAT
38 GGCGAGACTCTGCGCCAGAAACCTCCTGTGGGAGAAGCAGACCCTTACAGAGTGA
39 AAATGAAGCTCTGCATCCTGCTTACGCCTTACGCACCCGCGTCTGACCATCAAC
40 AGGGTGATGGGCTATCTGAGCTCCGCCTGA