Supplementary Information

Supplementary Sequences

Supplementary Sequence 1. Sequence of the ssODN donor oligo used to generate *Il3*$^{GFPfl/fl}$ mice. The *loxp* sites are shown in blue, intron sequence italicized, cDNA sequence of exons 2-5 in bold and black, P2A sequence in orange, *eGfp* sequence in green, 3- UTR underlined, and 500bp homology arms on the 5' and 3' ends are in red.

CACTGCATAGAAAGCCCAAGCTGGCTCAGAGCCAGGCTACTTCCTCCCACAACCTGTTTCCACTCCGTC
CATCTCTATGACAAAGGAAGAAGATGGCCTTTGAATAAGCAGTCTTTCTTCCCATGTCGATAATCTTGAG
TACTAGAAAGTGATGAATAAGTTTGTGGTTTGCTATGGAGGTTCCATGTCAGATAAAGCTGCTTCTGATG
CCTGCCCTCCCCCCTGCCCCGCCGGGCCCCGCCCCACCCCTCTCTGAATACATATAAGGTGAAGGCTC
CTGTGGCTTCTTCAGAACCCCTTGGAGGACCAGAACGAGACAATGGTTCTTGCCAGCTCTACCACCAGC
ATCCACACCATGCTGCTCCTGCTCCTGATGCTCTTCCACCTGGGACTCCAAGCTTCAATCAGTGGCCGG
GATACCCACCGTTTAACCAGAACGTTGAATTGCAGCTCTATTGTCAAGGAGATTATAGGGAAGCTCCCA
GTGAGTAACTGGCTGAATAACTTCGTATAGCATACATTATACGAAGTTAT*GGTTGGCCTGGTGCAGGCC*
*GGCTCCAACAGGTGCCTCAAGCCAGTGAGCCTCATGATTCTTTCTTTCTATGTCCTCACAG***GAACCTGAA**
CTCAAAACTGATGATGAAGGACCCTCTCTGAGGAATAAGAGCTTTCGGAGAGTAAACCTGTCCAAATTC
GTGGAAAGCCAAGGAGAAGTGGATCCTGAGGACAGATACGTTATCAAGTCCAATCTTCAGAAACTTAA
CTGTTGCCTGCCTACATCTGCGAATGACTCTGCGCTGCCAGGGGTCTTCATTCGAGATCTGGATGACTT
TCGGAAGAAACTGAGATTCTACATGGTCCACCTTAACGATCTGGAGACAGTGCTAACCTCTAGACCACC
TCAGCCCGCATCTGGCTCCGTCTCTCCTAACCGTGGAACCGTGGAATGTGGAAGCGGCGCAACAAACT
TCTCTCTGCTGAAACAAGCCGGAGATGTCGAAGAGAATCCTGGACCGATGGTGAGCAAGGGCGAGGA
GCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGC
GTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCG
GCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGC
TACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCG
CACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACC
CTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGC
TGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTG
AACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACA
CCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCACCCAGTCCGCCCTGAG
CAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTC
TCGGCATGGACGAGCTGTACAAGTAAAACAGCAGGCAGAGCACCTAAAGTCTGAATGTTCCTCATGGCC
CA**ATAACTTCGTATAGCATACATTATACGAAGTTATTGGTCAAAAGGATTTTACATTCCTTTATGCCATCA**
AATGTCTTATCAATTTATCTACTTTCTGAAATTTACAACTCTCCTTTGGCTTTACCTAATTATGTTCCTATT
TTATTCCATTAAGGCTATTTATTTATGTATTTATGTATTTATTTATTTATTGCCTTCTGTGATGTGAGTATAT
CTGTTTTAGCTGAGGAGGAGTTTCTCCAAAGAAAATTCCAAGGAAGACTGGGGCCATGTTCATTTGTCC
CTTGTGGAAATAAATAACTTTGAACAAATGGGTTTGGTTTCGTCCAGTTTCTTGAGGAGTTTGGATTGAT
CTCTGTAACAGTCCTAGAGGATACTTGTCCGGACATCACATGCGGCTACACAGCATGCAACATGTATCA
GATCTTGGTCTGGACATTTAACCTTTACTATTTAATCTACTCTTCACTCCAAACCAGAATGTGTGATCTCT
GTTTTATGGGACTACAGAAGTCCAGTTTGGCAAAGTTAGAC

Supplementary Sequence 2. Sequence of the ssODN donor oligo used to generate *Il3ra*$^{fl/fl}$ mice. The *loxp* sites are shown in blue, intron sequence italicized, cDNA sequence of exons 2-5 in bold and black, P2A sequence in orange, *eGfp* sequence in green, 3- UTR underlined, and 500bp homology arms on the 5' and 3' ends are in red.

CCACGCCCCCCACTTCCTGTCGGTCGGGGCCCCACCCCCGGGTGTCTCACAAGACTCAGGCCCAGCCC
CCTGGCGAAGGATGGTGTCACCTGTCAGTCACCCAATGCCCCATCCACCCGGTTCCTGTCCTGTTCTGT
GACTTCATCCAGGTGTCAATCAGAGCTCTGGTCCCACCCCTTTGCTTCCTCTCCCAAACCTTACTTCCTG
TCACGAAGGATGATGTCATTCTCACCCCCAGATGTCAATCAAAACCCAAATCCCGCCCCCTAAGCTCTT
CCCTTCTTGTTGGCCTGTCCCAGCTCCGGGTGTCAATCTCAGCTCAAGCCCTGCCCACTAACTTCCTGTC
ATGGCGAATGAAGTCATCTCTGCACCCCCCCTTGTCAATCAAGGCTCAGGCCACGCCCACTGATGGTG
GATGCCATCATCATCCTGGTCGAAGACATCACTAAGAGAGGCCCCGCCCCATCGCTTTCTGTCATAGGG
GACCAATGATGTCACCTATAACTTCGTATAGCATACATTATACGAAGTTAT*AGGGACATGTCACTTGCCT*
CTCATGTCATCTGGGTGTCAATCAAAGCCTAAGTCCCGCCCACTTCCTTTCTTTTCCACCCCCTCACTTCC
TGTCACGGAGAATGGTGTCAATCAAAGCCCAGGCACCTCCCACAACTGTGGATGATGTCACCTGTCACTC
*AAGCCCCACCCCACCTCCCCTTGACAACA***GCTGCGGTCCGTGAGGCTCCACCCACTGCTGTGACCACGC**
CCATCCAGAACCTGCATATCGACCCCGCCCACTACACACTGAGCTGGGACCCCGCCCCCGGCGCTGAC
ATCACGACAGGGGCTTTTTGCAGGAAGGGCAGGGACATCTTTGTCTGGGCTGACCCCGGGCTTGCCCG
CTGCTCATTCCAGTCGCTCTCCCTCTGCCATGTGACCAACTTCACCGTCTTCCTGGGGAAGGACAGGGC
TGTGGCAGGATCCATCCAGTTCCCCCCAGATGATGATGGCGACCACGAGGCCGCAGCCCAGGACCTG
CGCTGCTGGGTGCATGAGGGGCAGCTGAGCTGCCAATGGGAGCGGGGTCCGAAAGCAACGGGTGACG
TGCACTACCGGATGTTCTGGCGTGATGTGCGGCTCGGTCCTGCCCACAACCGCGAGTGTCCACACTAC
CACAGCCTTGATGTCAACACCGCTGGCCCCGCCCCTCATGGTGGCCATGAAGGCTGCACCCTTGACCT
CGACACTGTCCTTGGCTCCACCCCCAACAGCCCTGACCTTGTCCCCCAGGTCACCATCACCGTCAACG
GCAGTGGCCGCGCTGGCCCCGTGCCCTGCATGGACAACACTGTGGACCTGCAGCGCGCAGAGGTCCT
GGCCCCGCCCACGTTGACAGTGGAGTGCAACGGCTCTGAGGCCCATGCCCGATGGGTCGCGCGGAAC
AGATTCCACCATGGCCTCCTTGGGTACACCCTGCAGGTCAACCAGAGCTCCCGCTCAGAGCCACAGGA
ATACAATGTCTCCATCCCCCACTTCTGGGTCCCCAACGCTGGTGCCATCTCCTTCCGGGTCAAGTCGAG
GTCAGAGGTTTACCCTCGGAAGCTCAGCAGCTGGAGCGAAGCCTGGGGCCTCGTCTGCCCCCCAGAG
GTGATGCCTGTGAAGACAGCCTTGGTGACTTCAGTGGCTACGGTGCTGGGGGCAGGGCTCGTGGCAGC
TGGGCTCCTGCTGTGGTGGAGGAAGTCGCTGCTCTACCGCCTGTGCCCACCCATTCCACGCCTGCGCC
TGCCCTTGGCAGGGGAGATGGTCGTGTGGGAACCAGCTCTTGAAGACTGCGAGGTGACGCCTGTGACA
GACGCCGGAAGCGGCGCAACAAACTTCTCTCTGCTGAAACAAGCCGGAGATGTCGAAGAGAATCCTG
GACCGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGG
CGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTG
ACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGAC
CTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCA
TGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCC
GAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGG
ACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGAC
AAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGC
TCGCCGACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTA
CCTGAGCACCCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAG
TTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTGA<u>GAACTGTGT</u>**ATAACTTCG**
TATAGCATACATTATACGAAGTTATGGGGGCTGGGGCATAGGGAGCGGTGGGCGGGGTCAATAAAGTG
CGTGGATTCCTGGGACTTCCTGTGCTGCTATCAGTCATGCTCATCTGGCCCCACCCCAGCTCTGCCCCC
ACCCAGAAGTCCTCACCATGACCATGACTGACAGGAAGAGGCAGGGCTTCGACAGGAAGTGGGGCTC
TGAAGGAAAACCAAGGGAGGAAGTCCTGCCCACCACATGGCACGTGGACCCAGTGACCCCTGCCCAA
GGGTGGCCCAGACAGGAGCTGAGACAGAGGGATTGCCAGGGTCAGTCGGGGGTCGTTCTGGGATCAA
AGGTTGAATGTAATGTCAGACATCTTTATTTGCCCCACAGCGGTCATCTTGGGGGTAGGTGGAAAGGGG
ACGGGGCCTGGAGGTCAGAGTTCAACTGCAAGTGTACGGTAGGTCAATGATGTCACATCCTGTTGCCA
CAGCACTTCCTGATCTGGCAAGATCCATGAAACACATTGTTTGTCAAATA