Table SI. Oligonucleotide used for small interfering RNA.

| Oligo name | Sense | Antisense |
|---|---|---|
| *FLI1*-1142 | CCCUUCUGACAUCUCCUACAUTT | AUGUAGGAGAUGUCAGAAGGGTT |
| *FLI1*-294 | CCCAUGAACUACAACAGCUAUTT | AUAGCUGUUGUAGUUCAUGGGTT |
| *ISG15*-142 | CAUGUCGGUGUCAGAGCUGAATT | UUCAGCUCUGACACCGACAUGTT |
| *ISG15*-320 | CUGAGCAUCCUGGUGAGGAAUTT | AUUCCUCACCAGGAUGCUCAGTT |
| Negative control | UUCUCCGAACGUGUCACGUTT | ACGUGACACGUUCGGAGAATT |

Table SII. Oligonucleotide used for short hairpin RNA.

| Oligo name | Targeting of the sequence |
|---|---|
| *FLL1-1* | CCCATGAACTACAACAGCTAT |
| *FLL1-2* | CCCTTCTGACATCTCCTACAT |
| *ISG15-1* | CATGTCGGTGTCAGAGCTGAA |
| *ISG15-2* | CTGAGCATCCTGGTGAGGAAT |
| *Negative control* | TTCTCCGAACGTGTCACGT |

Table SIII. Oligonucleotide primers used for reverse transcription-PCR.

| ID | Oligo name | Oligo sequence | Product size |
|---|---|---|---|
| *FLL1* | SJ205 | AGGGGCACAAACGATCAGTA | 124bp |
| | SJ206 | GAATTGCCACAGCTGGATCT | |
| *ISG15* | SJ4002 | CTCTGAGCATCCTGGTGAGGAA | 136bp |
| | SJ4003 | AAGGTCAGCCAGAACAGGTCGT | |
| *FECR1* | SJ3827 | CTGTTGTCACACCTCAGTTAC | 198bp |
| | SJ3829 | CTGGCTGATTGATCCACTCCTGC | |
| $\beta$-actin | J880 | CAGGTCATCACCATTGGCAATGAGC | 135bp |
| | J881 | CGGATGTCCACGTCACACTTCATGA | |
| U2 | JH1055 | ATCTGTTCTTATCAGTTTAATATCTG | 151bp |
| | JH1056 | GGGTGCACCGTTCCTGGAGGTAC | |

Table SIV. Oligonucleotide primers used for *FECR1 CRIST assay.*

| Oligo name | | Oligo sequence | Product size(bp) |
|---|---|---|---|
| 5'-Ctl | JH2521 | GCATAATCTTATTTGTCCTCCAATAACC | 124 |
| | JH2522 | GCAGAAAAGTTCTCCCACAAGC | |
| P1 | JH4053 | CTCGGTTTTCGTCCGAGTCTTC | 119 |
| | JH4054 | TTTTTCCAGCCGGAGACAAACT | |
| P2 | JH2756 | GGGCTGCGAGGTCAGGCT | 106 |
| | JH4528 | GTTGCCCCGCCGCTTACCTTA | |
| E1 | JH2528 | AGGGAGCTATAAGAGCCTAT | 163 |
| | JH2529 | GAGACACTTGCATGAACACATC | |

Table SV. Oligonucleotide primers used for *ChIP*.

*A, ISG15 CHIP*

| Oligo name | | Oligo sequence | Product size (bp) |
|---|---|---|---|
| A | SJ4150 | ACACCAATCTGAGCAAATACTG | 158 |
| | SJ4151 | GCTGTCATCACATGGACTAATG | |
| B | SJ4152 | TTATAATAGGGCCGGTGCTGCC | 119 |
| | SJ4153 | GCCTTACCATGGCTGTGGGCTG | |
| C | SJ4154 | CCACTGACGGCGTCCAACTC | 134 |
| | SJ4155 | CTCTCCAGAAGAGCAGAGGCAAG | |

*B, BCL2 CHIP*

| Oligo name | | Oligo sequence | Product size (bp) |
|---|---|---|---|
| A | SJ4158 | ACCAGGAGGAGGAGAAAGGGTG | 108 |
| | SJ4159 | CTAAAAAGGATGACTGCTACGAAGTTC | |
| B | SJ4160 | CGCGTCCTGCCTTCATTTATCCAG | 169 |
| | SJ4161 | CAGGCATGAATCTCTATCCACGGG | |

Table SVI. Oligonucleotide primers used for Chromosome conformation capture.

| ID | Oligo name | Oligo sequence |
|---|---|---|
| promoter, 1st | SJ4510 | ACACCAATCTGAGCAAATACTG |
| promoter, 2nd | SJ4260 | GAGTGTTGTTATCTCTGGGTAG |
| promoter, 1st | SJ4261 | TGCCCCAGAGTGAGCGGAAG |
| promoter, 2nd | SJ4262 | CCGAATGACCGAAAGACAGGG |
| promoter, 1st | SJ4263 | GTGGGCTCTGTGCCAGCC |
| promoter, 2nd | SJ4264 | TCTCCCTCCCCCAGCCAAG |
| promoter, 1st | SJ4265 | CCAGTGCCTTGTGTGTGG |
| promoter, 2nd | SJ4266 | TGGCGCCGCAGTCTCTGAAC |
| 5'enhancer 1,1st | SJ4267 | CGCGGGAAGTCGGGAAGG |
| 5'enhancer 1,2nd | SJ4268 | CTCGGTCTCGAGCCTCTTGG |
| 5'enhancer 1,1st | SJ4269 | CTCTGTCGCTCCCAAGGCTTTC |
| 5'enhancer 1,2nd | SJ4270 | TGCAGCCCTCCGTGCTCCA |
| 5'enhancer 2,1st | SJ4271 | GGCCGGCCATTGTGTCTG |
| 5'enhancer 2,2nd | SJ4272 | CACCCTCCCTCCTTCCTG |
| 5'enhancer 2,1st | SJ4273 | CGGCAGCTGAGGGACAGC |
| 5'enhancer 2,2nd | SJ4274 | CCAGGTGTCCAGCATGGC |
| 5'enhancer 2,1st | SJ4275 | CTCTCTGCCAGAGCCGTG |
| 5'enhancer 2,2nd | SJ4276 | CCTGGAGTCCTACCCACTCTC |
| 3'enhancer, 1st | SJ4277 | GAGGCAGGCGGACCACTTG |
| 3'enhancer, 2nd | SJ4278 | GACCAGCCTGGCCAACATGATG |
| 3' control | SJ4279 | GTTACCGTGCCCTGTCTG |
| 3' control | SJ4280 | ATGGGCCTGGCCTAGACTTC |
| 5' control | SJ4281 | CTATAAAGAAACGCCTGACAG |

Table SVII. Oligonucleotide primers used for *ISG15 DNA methylation.*

| Oligo name | | Oligo sequence | Product size (bp) |
|---|---|---|---|
| CpG1 | SJ4193 | TTAGTGTTTTGTGTGTGGTGGGTT | 255 |
| | SJ4194 | CCCTAACTAACAAAAAAAACCCTATCCTA | |
| CpG2 | SJ4195 | TAGGGTTTTTTTTGTTAGTTAGGGTT | 378 |
| | SJ4196 | ACCTTTATTTCCRACCCTTAATCCTA | |