

1 (a)

2 GGCATTTCCGGCCAGGGAGGACGCTCCAGATGAATGGGTAAGTACATCAAGAGCTTCGTGGAGCGC
3 GTGCTGAAGAACGAGCAGTAATTCTAGGCGATCGCTCGAGAGGGAGACTGACTCTACTCGTGGGCC
4 AATAATTTCTGTGAAGTTTATGGGAACGTATACGTTTGTACTAGATGATACGAACATATCTGTTGGTAC
5 TAGATGATAGCTAAGGGTTTGCGCCAAGTAGAGCTTCTCAGGAGCCTCTATAATGGTGTCTAATAGG
6 CTTTACGAATGTGAACTCATGTTGAAGAACAGCTGTTACCAAATAGCTGTTTCATGAAGGCGGGGA
7 CAGCTTAGTTTTTCTCAGAATTATATTTCTCATTTTACTTTAACTAGCAGCTGTTATTTGGATGTCTAC
8 ACCAATGAGATAATCAAGCAATTAGATTTCTGTATGCACCAGCAAACCAGTCAGTGTGTAGGAGATG
9 GAAGAGGAAATAAATCACACACATGTATGGTGTGTATGTGTGTGTGTAGGCATAAACAGAGAAAAA
10 CGTACTGGCACATACATAATAAGCACCTGCTAATTGTAGGTGTCATAATACTAAGATGTTATTTCTTAG
11 GGTTATGACGTATTTGTCATATTGGACCTACCCAGGAGGTAGCTGAATATTTCTGCAGTGATCTGGGT
12 GTCTTGCAGGGAGCACTGCTGGTCACAGGTCTGATATGAGGGAAGAAAAGGTTTTCACACAGAACA
13 ATCAGGATGTAATAATGTGCTTTCCATTTTTAAAAAGCAGTCATCTGGGCAAGTGGCTTTTTGGTCTTT
14 TGACCAACACTGTTCTCAACTTGCAAATTAATTCTTAGGCAGTTCTTACACAGCGGCCGCTGGCCGC
15 AATAAAATATCTTTATTTTCATACATCTGTGTGTTGTTTATAAAGC

16

17 (b)

18 ACTGGATTGGTCATGCAGAGCTCCAGATGAATGGGTAAGTACATCAAGAGCTTCGTGGAGCGCGTGC
19 TGAAGAACGAGCAGTAATTCTAGGCGATCGCTCGAGAGGGAGACTGACTCTACTCGTGGGCCAATA
20 ATTTCTGTGAAGTTTATGGGAACGTATACGTTTGTACTAGATGATACGAACATATCTGTTGGTACTAGA
21 TGATAGCTAAGGGTTTGCGCCAAGTAGAGCTTCTCAGGAGCCTCTATAATGGTGTCTAATAGGCTTT
22 ACGAATGTGAACTCATGTTGAAGAACAGCTGTTACCAAATAGCTGTTTCATGAAGGCGGGGGACAG

23 CTTAGTTTTCTCAGAATTATATTTTCTCATTTTACTTTAACTAGCAGCTGTTATTTGGATGTCTACACC
24 AATGAGATAATCAAGCAATTAGATTTCTGTATGCACCAGCAAACCAGTCAGTGTGTAGGAGATGGAA
25 GAGGAAATAAATCACACACATGTATGGTGTGTATGTGTGTGTGTAGGCATAAACAGAGAAAAACGT
26 ACTGGCACATACATAATAAGCACCTGCTAATTGTAGGTGTCATAATACTAAGATGTTATTTCTTAGGGT
27 TATGACGTATTTGTCATATTGGACCTACCCAGGAGGTAGCTGAATATTTCTGCAGTGATCTGGGTGTCT
28 TGCAGGGAGCACTGCTGGTCCACAGGTCTGATATGAGGGAAGAAAAGGTTTTCCACACAGAACAATCA
29 GGATGTAAATTACACTTTCCATTTTTAAAAAGCAGTCATCTGGGCAAGTGGCTTTTTGGTCTTTTGAC
30 CAACACTGTTCTCAACTTGCAAATTAATTCTTAGGCAGTTCTTACACAGCGGCCGCTGGCCGCAATA
31 AAATATCTTTATTTTCATTACATCTGTGTGTTGGGTTTTTTTTGTGTGAGGATCTAAATGAGTCTTTTCGG
32 ACCCTCGCGGGGGCCGCTTAAGCGGTGGTTAGGGTTTGT

33

34 Figure S1.

35

36

37

38

39

40

41

42

43

44

45 (a)

46 GGAGAGCTCCAGATGAATGGGTAAGTACATCAAGAGCTTCGTGGAGCGCGTGCTGAAGAACGAGC
47 AGTAATTCTAGGCGATCGCTCGAGGTTTCATTCCAGAAACATCTCAGATTTATGATGGGATGAGTCAT
48 ATTAAGGGTAATATGTTCTACATGGTGTTCATAGCAGAGAGAGAAAAAATTGAGTCAAATTTGAAA
49 ATGACTTCAAAAGTTAAAGAGATCTGTTTGTCCACACTCAGTAATACAGAAAAAAATGATGAGAA
50 AGCCTTCAAGAGCCTAGTAATGTAGACCTACTCTTCTAATGATTCTCTTAACCGGCTACAGTGGGAA
51 GTTCTCGAATGCCTTGTGTCTAGCTAGAAACAAGCCCAACAATACTAGCGTTTTGAGCATTAAATCTC
52 ATGTAGAAAGAGCTAATCCATCTGAATTACACATACATCTGAAAGAAGACTTCAGACTAACACTTG
53 TGAAATGTAATGTCTTCAAGAGTGTGATTGTTTTATCTTGAGGTGTCTTTGTTTTACACTAATTTACA
54 CATAACATATGCACACTTGTATCTAATAGGCATCCTGTACATTGTTAAATATATGATGTACTTGTTT
55 TTGTGCTGCGGCCGCTGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTG

56

57 (b)

58 GGAGAGCTCCAGATGAATGGGTAAGTACATCAAGAGCTTCGTGGAGCGCGTGCTGAAGAACGAGC
59 AGTAATTCTAGGCGATCGCTCGAGGTTTCATTCCAGAAACATCTCAGATTTATGATGGGATGAGTCAT
60 ATTAAGGGTAATATGTTCTACATGGTGTTCATAGCAGAGAGAGAAAAAATTGAGTCAAATTTGAAA
61 ATGACTTCAAAAGTTAAAGAGATCTGTTTGTCCACACTCAGTAATACAGAAAAAAATTACACAGAA
62 AGCCTTCAAGAGCCTAGTAATGTAGACCTACTCTTCTAATGATTCTCTTAACCGGCTACAGTGGGAA
63 GTTCTCGAATGCCTTGTGTCTAGCTAGAAACAAGCCCAACAATACTAGCGTTTTGAGCATTAAATCTC
64 ATGTAGAAAGAGCTAATCCATCTGAATTACACATACATCTGAAAGAAGACTTCAGACTAACACTTG
65 TGAAATGTAATGTCTTCAAGAGTGTGATTGTTTTATCTTGAGGTGTCTTTGTTTTACACTAATTTACA
66 CATAACATATGCACACTTGTATCTAATAGGCATCCTGTACATTGTTAAATATATGATGTACTTGTTT

67 TTGTGCTGCGGCCGCTGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGT

68 Figure S2.

69

70

71

72

73

74

75

76 **Supplemental Figure legends**

77 **Figure S1.** LncRNA target sequence fragments as constructed by biosynthesis. (a) *SSC-TCONS_00010987-WT*;

78 (b) *SSC-TCONS_00010987-MT*. The black line indicates an insertion sequence, the carrier sequence is on both
79 sides, and the target sequence is yellow.

80 **Figure S2.** *LEPR* 3'-UTR fragments as constructed by biosynthesis. (a) *SSC-LEPR-WT*; (b) *SSC-LEPR-MT*. The
81 black line is labeled as an insertion sequence, the carrier sequence is on both sides, and the target sequence is
82 yellow.

83