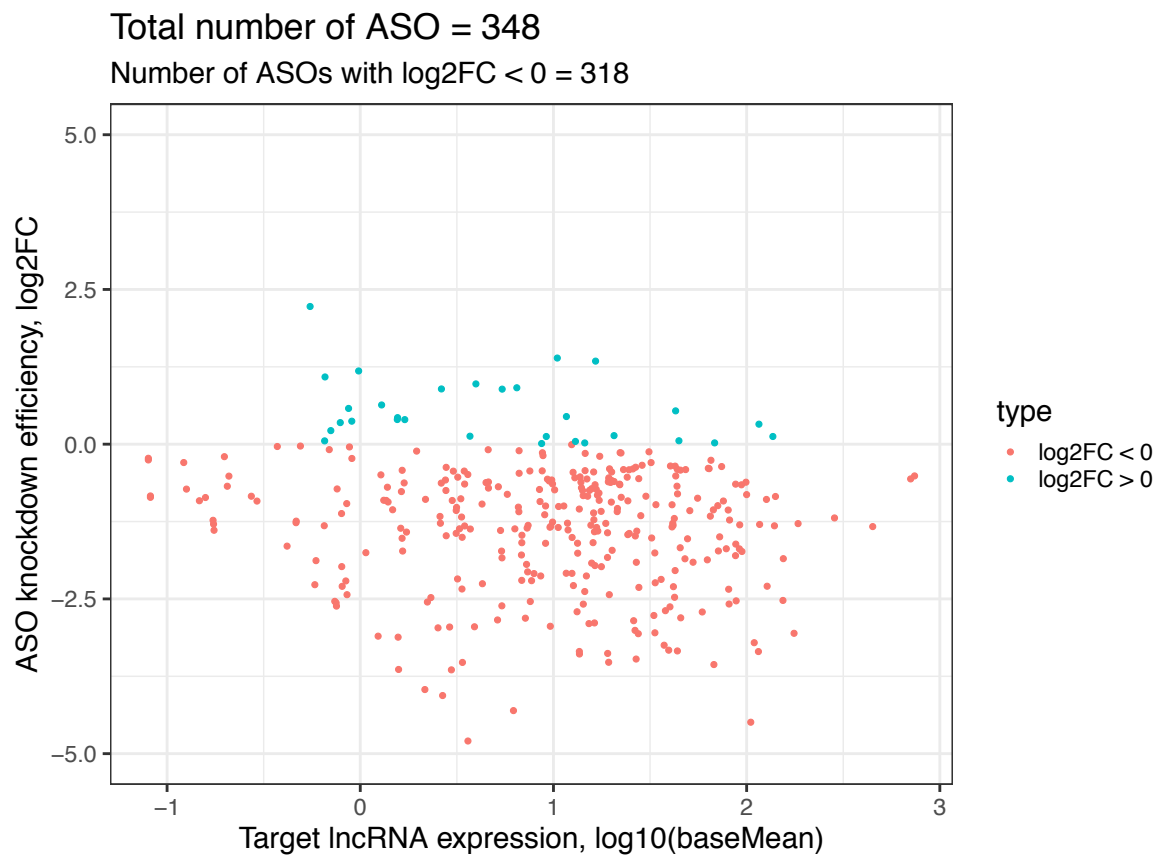
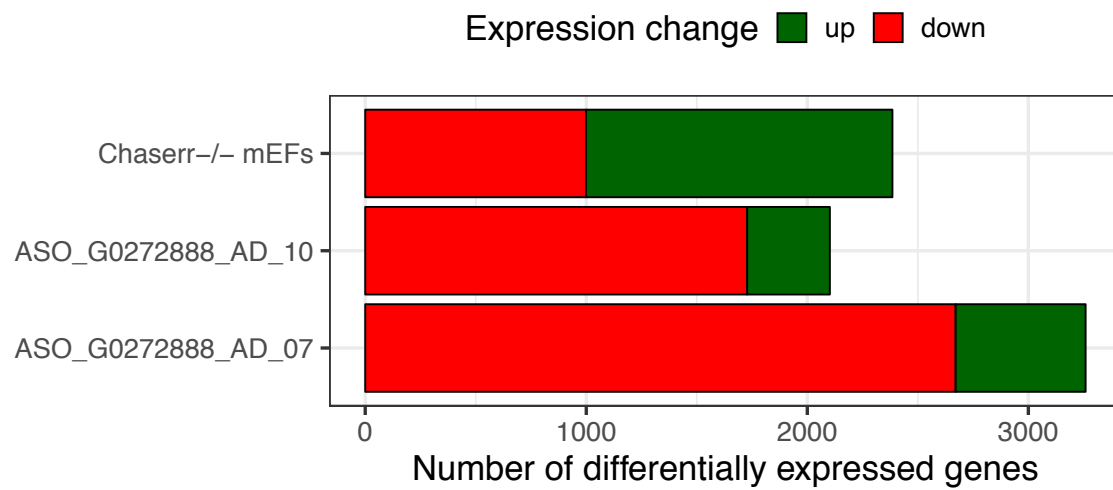


341 **Supplementary figures**

Supplementary Figure S1. Efficiency of all the ASO knockdowns in the FANTOM6 project.



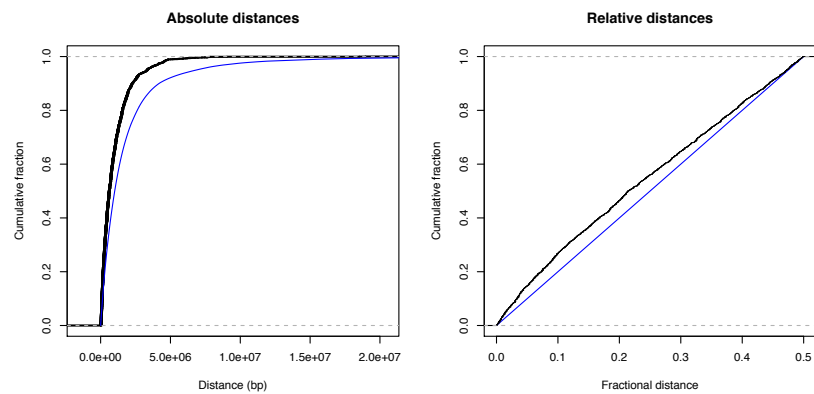
Supplementary Figure S2. The overlap between differentially expressed genes identified in two independent knockdown experiments of the *CHASERR* lncRNA.



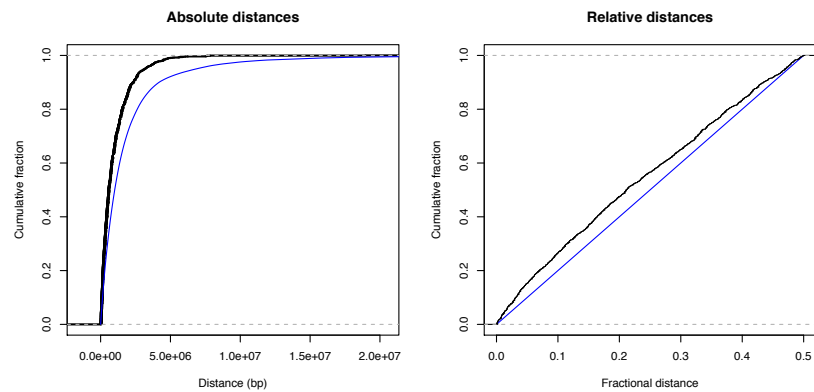
Supplementary Figure S3. Types of differentially expressed genes in two independent *CHASERR* knockdown experiments and in *Chaserr*^{-/-} mouse embryonic fibroblasts (mEFs).

A ASO_G0272888_AD_07**All Chromosomes**

Query population : 2667
 Reference population : 1243
 Relative Ks p-value : 1.43985e-12
 Relative ecdf deviation area : 0.0215167
 Relative ecdf area correlation : 0.0862894
 Relative ecdf deviation area p-value : <0.01
 Scaled Absolute min. distance p-value : <0.01
 Scaled Absolute min. lower tail : TRUE
 Jaccard Measure p-value : 0.1
 Jaccard Measure lower tail : FALSE
 Projection test p-value : 0.00388599
 Projection test lower tail : FALSE
 Projection test observed to expected ratio : 11.0042

**B ASO_G0272888_AD_10****All Chromosomes**

Query population : 1668
 Reference population : 1243
 Relative Ks p-value : 9.52247e-10
 Relative ecdf deviation area : 0.0245289
 Relative ecdf area correlation : 0.0966966
 Relative ecdf deviation area p-value : <0.01
 Scaled Absolute min. distance p-value : <0.01
 Scaled Absolute min. lower tail : TRUE
 Jaccard Measure p-value : 0.41
 Jaccard Measure lower tail : TRUE
 Projection test p-value : 0.055251
 Projection test lower tail : FALSE
 Projection test observed to expected ratio : 0



Supplementary Figure S4. Output of the GenometriCorr tool for the two ASOs corresponding to the lncRNA AC013394.2 (*CHASERR*).

CLUSTAL multiple sequence alignment by MUSCLE (3.8)

```

ENSMUST00000184554.7 -----
ENST00000556895.T0 CACCCGAGCTGTACGGCTTCCGCCGCGCGAGGCCCGCCGCGCGGGAGCTA

ENSMUST00000184554.7 -----
ENST00000556895.T0 CGCCCGACGGCCAGCAGGCCCGCGGAGTGGGGCTGCCGGCTGAGGCGAGCGGGC

ENSMUST00000184554.7 -CGCGCG--CGATGTGGGAGCTCGCGCCGAGCGCCCGGGAGGCCGGGCCACGACGCC
ENST00000556895.T0 GCGCGCGTTCGGCGTCACAGCCCGCGCAGAGGCCCGCAGGCGCGCGGCCACGACGCC
***** ** * ** * ** * ** * ** * ** * ** * ** * ** * ** *

ENSMUST00000184554.7 CGTGGCTCCGCTCGCGCAGCGCGGTGCTGGTCTCGCGCGCGCGCGGAGCGGCTTCGC
ENST00000556895.T0 GAAAGCGCCGCTGCGGTTGCCGCTCGGAGGC--TCCCGCGGCCCGCGCGCTGGACC--C
** ***** ** * ** * ** * ** * ** * ** * ** *

ENSMUST00000184554.7 GCCGCGGCGGGAGGCTCGCGCGGCGACCCGTCCTGGACACGCGAGGAAGAGCGAGCCG
ENST00000556895.T0 GCGCGGCGGGAGGCTCGGCGGCGCGTCCGCGCCGGG--ACTCGGTTTGGGCGACCG
* ***** ** * ** * ** * ** * ** * ** * ** *

ENSMUST00000184554.7 ATGCGCGCAGGGGCGCGCTTCGACCCGGTAACCTAGAAGATGATAATTAATGTGGTTGC
ENST00000556895.T0 GAGGTGCCGTTGGCGCGCTCGGACCCGGTGACTTAAGAGATTAATAATTTGTTGC
** * * ***** ***** ** * ** * ** * ** * ** *

ENSMUST00000184554.7 TGATAATCTGAATAAATACAG----CTTTTATCCAGGTGTGCATTTTGAAGACTGAG
ENST00000556895.T0 TGTTGGTTCTGAACAAATAGTTCCTTTATTTGAGGTATGCCATTTTGAAGACTGAG
** * ***** ** * ***** ** * ***** *****

ENSMUST00000184554.7 ACCATAGAGTTCTA-----AGAATAAGGAAAGAGCCCTTGGGAA-----ATTATTATAT
ENST00000556895.T0 ACGTTGGAATTTTATCTAGAGGATAAGGAAA---TCTTTGGGAAGTCAGTATTTTAT
** * ***** ** * ***** ** * ***** ** * *****

ENSMUST00000184554.7 ATAGCAAAATGTGAATCCTCAGATGGAA-----TGAAAGGCTGCACCA-----TAGAC
ENST00000556895.T0 ATAGCAAAATATGAA--CCTCAAATGAATCCTCTAAAGGCCCATACAATGAAGTAGAC
***** ** * ** * ** * ** * ** * ** * ** * ** * *****

ENSMUST00000184554.7 ATC-----GAAGCATTTAAATTTTTTCTTCTAATTTTTTATGAAGCACCCGCTTGAAGA
ENST00000556895.T0 ATTGGTGGAAACATTTACACC-----CAGTCAGCTTGAAGA
** ***** ** * *****

ENSMUST00000184554.7 GTTTGAAATGGACTTTACCACTGAGAAATCAAGATGGCAGCCATTATGGGGAATTGAGG
ENST00000556895.T0 GTTTCAAATGGACCTTACCCTGAGAAATCAAGATGGCAGTCTACTATGGGGAATTGAGG
**** ***** ***** ** * *****

ENSMUST00000184554.7 -AAAAATGGATTAATGCAAGAATGCTGTAATATTACAACCAACACAGGATTCTTTTAAT
ENST00000556895.T0 AAAAAATGGATTAATACAAGAGTCTGTGATAATACAACCAAGACAGGGTCTTTTAAAC
***** ** * ** * ** * ***** ** * *****

ENSMUST00000184554.7 GTGGATTCCATGAAATGAATGA-----TTCTTACCAACCAAAATGGACAGTGGGA
ENST00000556895.T0 ATGGATTCCATGAGTGAATGAAGACATAGGTTTCTTACCAACCAAAATGGACAGTGGGA
***** ** * ***** *****

ENSMUST00000184554.7 ATTTACTTCTAAAGACTTGTACATGTATGATATTTTGGACATCTGGAGAAGACTCT
ENST00000556895.T0 TTTGACTTTCTAAAGACTTTT-----TTGTGGACA--TTTGGACATTTGGAGAAG-----
** **** ***** ** * ** * ***** *****

ENSMUST00000184554.7 ACAATTCTACAAATGGTAGTTTGTATTCTTGGAAATTTCTTGCAGTTTGATCTGAAGTGAC
ENST00000556895.T0 -----

ENSMUST00000184554.7 CTTATGGAATGTTAACTTTAATAAAATCTCTAAACTTAAAAA
ENST00000556895.T0 -----AAAG
***

```

Supplementary Figure S5. Pairwise sequence alignment of the human and mouse *CHASERR* orthologs.