

### Supplementary Information:

Mouse Nos1 and predicted chicken Nos1 sequence alignment shows 79% homology. The highlighted segments are the siRNA target sites.

```
mouse      gaggcgacagaaactctgcagccggttcttgcccggagtagctcaggttctctgtgggagt
chicken    -----

mouse      cgtcttggttggaggtcttctgaaggacacagataccatggaagagcacacggttgggg
chicken    -----atggaggagaacgccttcagtg
                                   ***** ** * * * * * * *

mouse      tccagcagatccaaccaacgtcatttctgtccgtctcttcaaacgcaagtgggaggtc
chicken    tgcagcagctgcagccaacgtcatctcggtgaggctgttcaagcgaaggtggggggcc
* ***** * ** ***** * * * * * * * * * * * * * * * * * *

mouse      tgggcttctggtgaaggaacgggtcagcaagccccggtgatcatctcagatctgatcc
chicken    tgggcttctggtgaaggagcgcgtcagcaagccgcccgtcatcgtctccgacctgatcc
***** ** ***** * * * * * * * * * * * * * * * * *

mouse      gaggaggtgccgaggagcagagcggccttatccaagccggcgacatcattctcgccgtca
chicken    ggggaggggctgctgagcagagcggcctcgtgcaggtggggacatcattttagctgtca
* ***** ** * * ***** * * * * * * * * * * * * * * * * *

mouse      atgatcggcccttggtagacctcagctatgacagcgcctctggaagttctcaggggcatg
chicken    atggcgcccttggtggacaccagctacgagagcgcgtggagatcctgaggagcatcg
*** ***** * * * * * * * * * * * * * * * * * * * * * *

mouse      cctctgagaccatgtggtcctcattctgagaggcctgagggcttactacacacctgg
chicken    cctccgagacctacgtggtgctcatcctgcgtggccctgagggcttcaccactcacctgg
*** ***** * ***** * * * * * * * * * * * * * * * * *

mouse      agaccaccttcacaggggatggaacccccaaagaccatccgtgtgaccagcccctgggga
chicken    agaccaccttgcagcgcagcgaacccccaaaaccatccgcgtcaccggcccctctgcc
***** * * * * * * * * * * * * * * * * * * * * * *

mouse      cacccaccaagctgtcgatctgtctcg--ccagccatc--agccagcaagaccagcca
chicken    ctgcccagagctgttgagttgtccaacccagccttcacagccaggagttgccgg---
* * * * * * * * * * * * * * * * * * * * * * * * * * * * *

mouse      ttagcagtagacaggtcccaggtcccag--taacggacctcagcatgcccaaggccgtgg
chicken    -cagccatgggt--tctctctggacaaggagacgggc-----ggg
* * * * * * * * * * * * * * * * * * * * * * * * * * * * *

mouse      acagggagccggctcagtctcccaggtcaatggtgtggccattgaccaccaatgaaa-
chicken    acgtggagcctg----tgggtccatgtcaacgggttgggtcaccggcccaagggcagga
** ***** * * * * * * * * * * * * * * * * * * * * * *

mouse      -----ataccaaggccaacctccag-----gacagcggaga-----aca
chicken    tagcaacaaggggaaggacagtgcctgcagccatctctgcctcaacgggtggagtgaaga
* * * * * * * * * * * * * * * * * * * * * * * * * * * * *

mouse      ggatgaactgctcaaagagatagaacctgtgttgagcatcctcaccggtgggggaaaagc
chicken    caacgagcttctcaaggagattgagcctgtcctggacctcctgaagagcagcagtaagga
* * * * * * * * * * * * * * * * * * * * * * * * * * * * *

mouse      agtcaacagagggggaccagccaaagcagagatgaaagacacaggaatcaggtggacag
chicken    tgggtggatgagatgtgccctgcaaggtagagacaaggatataagaagtcaggtggactg
* * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```



mouse ttttaaggacctggggctcaaatggatggcctccccgctgtgtccaacatgctgctggag  
chicken ttttaaggacctgggcctgaagtggtagcgtctgcctgcagtgtccaacatgctccttgag  
\*\*\*\*\* \*\* \*\* \*\*\*\*\* \*\* \*\* \* \*\* \*\*\*\*\* \*\* \*\* \*

mouse attggggcctggagttcagcgcctgtcccttagtggtggtacatgggcacggagatt  
chicken attggtggcttagagttctccgcctgcccttcagcggctggtacatgggcacagagatc  
\*\*\*\*\* \*\* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse ggcgttcgtgattactgtgacaactctcgatacaacatcctggaggaagttagccaagaaa  
chicken ggggtccgggattactgcgacaactcccgtacaacatcctggagcaagtggccaagaaa  
\*\* \*\* \* \*\*\*\*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse atggatttgacatgaggaagacatcctccctctggaaggaccaagccctggtggagatt  
chicken atgaacctggacatgagaaaacctcctcgctgtggaaggatcaggccctggtggagatc  
\*\*\* \* \*\*\*\*\* \*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\*

mouse aacattgctgtcctatacagcttccagagtgacaaggtgaccattgtggaccaccactct  
chicken aacatcgctgtgctgtacagcttccagagtgacaaagtgactattgtggaccaccactcg  
\*\*\*\*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse gccaccgagtccttcatcaaacacatggagaatgagtaccgctgcagagggggctgtccc  
chicken gccaccgagtccttcatcaagcacatggagaacgagtaccgctgccgtgggggctgtcct  
\*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \* \*\*\*\*\* \*\*\*\*\*

mouse gccgactgggtgtgattgtgcccccatgtcgggcagcatcacccctgtcttccaccag  
chicken gctgactgggtgtggtcgtgccgccatgtctggcagcatcaccccggttttccaccag  
\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\*

mouse gagatgctcaactaccggtcacccccgtcctttgagtaccagcctgatccatggaacacc  
chicken gagatgctcaactaccgcctcacaccctcctttgagtaccagcctgacccctggaacacc  
\*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse cacgtgtggaagggcaccaatgggacccccacgaagcggcgagccattggcttcaagaaa  
chicken cacatctggaagggagtcaatgggacgccaccaagaagagggccattggcttcaagaa  
\*\*\* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\* \* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse ttggcagaggccgtcaagttctcagccaagctgatgggacaggccatggccaagagagtc  
chicken ttggcaaaagctgtgaagttctcagccaagctgatgggacaagccatggccaagagggtc  
\*\*\*\*\* \* \*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse aaagcgaccattctctacgccaccgagacaggcaaatccaagcctatgccaagaccctg  
chicken aaagcaaccatcctgtatgccacggagacggggaagtacaggtctatgcaaaaaccctg  
\*\*\*\*\* \*\*\*\*\* \*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\* \*\* \* \*\*\*\*\* \*\* \*\*\*\*\*

mouse tgcgagatcttcaagcatgccttcgatgccaaggctatgtccatggaggaatgatgacatc  
chicken tgtgaaatcttcaagcatgcattcgatgccaaggctatgtccatggatgagatgatgacatt  
\*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\*

mouse gtgcacctggagcacgaagccctggtcttgggtggtcaccagcacctttggcaatggagac  
chicken gtgcacctagagcatgaaacctggtcctggtggtcacaagcacctttggcaatggagac  
\*\*\*\*\* \*\*\*\*\* \*\* \*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse cccccagagaatggggagaaaattcggtgtgctttgatggagatgaggcaccaccaactct  
chicken ccacctgaaaatggagagaaaattggctgtgcgctcatggagatgaagaatccaactcc  
\*\* \*\* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \* \*\*\*\*\* \*\*\*\*\* \* \* \*\*\*\*\*

mouse gtgcaagaggagaggaagagctacaaggtccgattcaacagcgtctcctcctattctgac  
chicken aacctggaggaggaagagctacaaggtccgtttcaacagtgctcctcctactcggat  
\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

mouse tcccgcaagtcatcaggcgatggaccagacctcagagacaactttgaaagtactggaccg  
chicken gcacggaagtcctcaagtgatggcctgactccagggacaactttgaaagtacagggccc  
\* \*\* \*\*\*\*\* \*\* \* \*\*\*\*\* \*\* \*\* \* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*



mouse          atcgtgtcctaccataaccgagatggagaaggaccggttcaccacggggtgtgctcctcc  
 chicken        gtggtctcctaccgactagagatggagaaggccctatccatcatggagctgtgctcctcc  
                  \* \* \* \* \*      \* \*      \*

mouse          tggctcaaccgaatacaggtgacgatgctcgtccctgcttcgtgagaggtgccctagc  
 chicken        tggctcaataggatccagagtgacgaggtcgtgcctgctttgtaagaggggtcccggg  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          ttccacctgcctcgaacccccaggtgccttgcacatcctggttgcccaggcaccggcatc  
 chicken        ttccacctgcccaggaacccccaggtgccttgcacatcctcattggccccggcaccggcatt  
                  \* \* \* \* \*      \*

mouse          gctcccttccgaagttttggcaacagcgacaatttgacatccaacacaaaggaatgaat  
 chicken        gcccatcctggagcttctggcaacagcgactccttgaaatccagcacaagggcctgaag  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          ccgtgccccatggttctggtcttcgggtgctgacaatccaagatagatcatatctacaga  
 chicken        cctgtccatggttctggtgttgggtgcccgaatccaggattgatcacatctacaaa  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          gaggagacctgcaggccaagaacaaggcgtcttcagagagctgtacactgcctactcc  
 chicken        gaggagacgcttttgcacaaaccacaggtgtcctcagagagctgtacacagcctactcc  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \*      \* \* \*      \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*

mouse          cgggaaccgacaggccaaagaatatgtacaggacgtgctgcaggaaacagctggccgag  
 chicken        cgggaaccggacaaaacaaagaatacgtgcaggacgtgttacaggagcagctggccaa  
                  \* \* \* \* \*      \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          tctgtgtaccgcgccctgaaggagcaaggaggccatatttctgtctgcggggacgttacc  
 chicken        acggtgtacaaagcgctgaaggagcagagaggccacatctacgtctgtggggatgtcacc  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          atggccgctgatgtcctcaaagccatccagcgcataatgaccagcaggggaaactctcg  
 chicken        atggctggggatgtcctcaagaccgttcagcgcacatcgtgaggcagcagggccagctgtcg  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          gaggaggatgctggtgtgttcatcagcaggtgagggatgacaaccggtaccacgaggac  
 chicken        gtggaggaggcagcactttcatcagcaagctacgggatgacagccggtaccacgaggat  
                  \* \* \* \* \*      \* \* \*      \* \* \* \* \*      \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          atctttggggtcaccctcagaacatagaagtgaccaaccgccttagatctgagtgccatc  
 chicken        atttttggagtcaccctgcccacgtacgaagtgactaaccgccttagatccgagctcatt  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*

mouse          gccttcattgaagagagcaaaaaagacacagatgaggtttccagctcctaa  
 chicken        gcattcattgaggagagcaaaaaagatacggatgagtga-----  
                  \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*      \* \* \* \* \*