

## Vector sequences

### *Chick Nanog*

ATGCCGTCCTACGGCTCTGTTAGGTGCGGACGCTACTACTGGCCCTCTCCGGGCAGCATG  
GATAGCGCGTCTGCCGCGGAAGCCCCAGCAGCAGACCTCTCCTTGACCACAGAGCAGAA  
AACGCCCTGCCACCCAGATGCCTCTCCAGCTTCTTCCAGCTCTGGGACACTCATTTCAGTA  
TACCCAGACTCTGCCACTAGCCCTACTGCAGACCACCCATCTCACCGCCCCACTTTTCA  
GAAGGTTAAGGATAAAGGTGAGAGTGGGACAAGGAAGGCCAAGAGCCGCACAGCTTTC  
TCCCAGGAGCAGCTGCAGACCCTGCACCAGCGGTTTCAGAGCCAGAAGTACCTCAGCCC  
CCATCAGATCCGGGAGCTGGCTGCTGCTCTGGGGCTCACCTACAAGCAGGTGAAGACGT  
GGTTTCAGAACCAACGAATGAAGTTTAAACGTTGCCAGAAAGAGAGTCACTGGGTGGAT  
AAAGGGATTTATCTACCACAGAATGGGTTTCATCAAGCTGCGTATCTGGATATGACCCCT  
ACGTTTCACCAGGGCTTCCCTGTTGTTGCCAACAGAAACCTTCAGGCTGTGACCAGTGCA  
CACCAGGCTTACAGCAGTGGCCAGACTTATGGGAATGGGCAGGGCCTGTATCCGTTTCAT  
GGCTGTGGAGGATGAGGGCTTCTTTGGAAAAGGTGGAACAAGCTGCAACGCCCAGCAGG  
CCATGGGTTTATTAAGTCAACAGATGAACTTCTATCATGGCTACTCTACCAATGTGGATT  
ATGACAGCTTGCAGGCAGAAGATACCTACAGCTTCCAGAGCACCTCTGATAGTATCACA  
CAGTTCTCGAGCTCTCCTGTACGGCATCAGTACCAGGCCCTTGGCATAACCCTGGGGACC  
CAGAATGGTTATGAGACTTAG

### *Zebrafish Nanog*

ATGGCGGACTGGAAGATGCCAGTGAGTTACAATTTTAAACCCATCTTATCATGCATATGCA  
TACGGGCTCATGTACCCGCAAGTGTGAGAGCAGGCGTCCCGAATCTGAGCTGGCCCGA  
TGCCGCGTACACACTCCGGCGGGGTCACAGCAGGCTACTTTACCGCTCAAACCTGCACA  
GTCGCCACCCTGGAGCCCGGAGAACGGCGGCGCCAGCAGCACCTACAGCCAGTACCCGG  
GACACTCGCAGAACGGACGGCTCTTTCTGTCTACAACAAGACTGAGCCCGACCAAAG  
GCCAAAGATGCAGAGCAGACCAGCAGTGATACACCAGTGATTCCGAGGGCCACACGCC  
AGATTCCTGGAGCTCAGCGAGCAGTCGAGAAGGGGTTCTCTGACCAACCTCAATCTGCC  
ATCCTGGAGAGATCGAGACTATGAAACAGACAGTGGTAGTCCTGACAGTGGAGAACGGA  
ACTTAACCTCCACAGCAGGAGAGGAGCCAGTCAATCTGAATCTGGGGGTCGATACCCAG  
CCTCCTCTGCCTGCATTGACTGCATCTCCTGTCCGGCCTCCGACCCTGCCCCGCAAGACC  
GGGCTGCTTTTTCTGAAGAACAGATGAATGCTTTGGTCAATCGGTTTAAATGTCCAGAGAT  
ACCTCACGCTGCAGAGATGAAAACGCTTGCTGGAGCAACAGGATTAACATAACAAGCAG  
GTA AAAACATGGTTTTCAGAACCGCAGGATGAAACTCAAGAGGCATCAGAGAGACAGCA  
GTTGGATGACTGAGAGATATGTTGTCAATGCTGTACCCAACACACCAGCTTCTCAATCTC  
AGTTTCAGAGTGAACCCCTGGAGCAAACCAAGACCACTACATTAACCCTCAGGTGAGA  
GAACCTGTTTTCAAGAGGAGTCCTCCAAAAACACCCTTCTACCCCAAGTTACCCACAGCCA  
CGCTCCCAACACAGGCCACCTCGAGACCCCAAGAACCTGGCCTCTGCCCCAGCTGTG  
ACGCACTATGAGTTCCTCAACCCATCAGCTACATGCCAGCACGTGATGGCAGCAATGC  
AGTGAACAAAGAAAGCAGCCCTTCTCCGCTGGCAACTTCGCCTACTGCTGGCCTGTGGGG  
AACTAAAGGAATAACTTTGCTGTGA

### *FLAG<sub>3</sub>-polyG linker-Mouse Nanog*

ATGGACTACAAAGACCATGACGGTGATTATAAAGATCATGATATCGATTACAAGGATGA  
CGATGACAAGGGATCCGGCGGCGGCGGCGCCATGAGTGTGGGTCTTCTGGTCCCC  
ACAGTTTGCCTAGTTCTGAGGAAGCATCGAATTCGGGAACGCCTCATCAATGCCTGCAG  
TTTTTCATCCCGAGAACTATTCTTGCTTACAAGGGTCTGCTACTGAGATGCTCTGCACAGA  
GGCTGCCTCTCCTCGCCCTTCTCTGAAGACCTGCCTCTTCAAGGCAGCCCTGATTCTTCT  
ACCAGTCCCAAACAAAAGCTCTCAAGTCTGAGGCTGACAAGGGCCCTGAGGAGGAGGA  
GAACAAGGTCTTGCCAGGAAGCAGAAGATGCGGACTGTGTTCTCTCAGGCCAGCTGT  
GTGCACTCAAGGACAGGTTTCAGAAGCAGAAGTACCTCAGCCTCCAGCAGATGCAAGAA

CTCTCCTCCATTCTGAACCTGAGCTATAAGCAGGTTAAGACCTGGTTTCAAACCAAAGG  
ATGAAGTGCAAGCGGTGGCAGAAAAACCAGTGGTTGAAGACTAGCAATGGTCTGATTCA  
GAAGGGCTCAGCACCAGTGGAGTATCCCAGCATCCATTGCAGCTATCCCCAGGGCTATCT  
GGTGAACGCATCTGGAAGCCTTTCCATGTGGGGCAGCCAGACTTGGACCAACCCAACTT  
GGAGCAGCCAGACCTGGACCAACCCAACTTGGAAACAACCAGACCTGGACCAACCCAACT  
TGGAGCAGCCAGGCCTGGACCGCTCAGTCCTGGAACGGCCAGCCTTGGAAATGCTGCTCC  
GCTCCATAACTTCGGGGAGGACTTTCTGCAGCCTTACGTACAGTTGCAGCAAACTTCTC  
TGCCAGTGATTTGGAGGTGAATTTGGAAGCCACTAGGGAAAGCCATGCGCATTTTAGCA  
CCCCACAAGCCTTGGAAATTATCCTGAACTACTCTGTGACTCCACCAGGTGAAATATGA

*FLAG<sub>3</sub>-polyG linker-Chick Nanog*

ATGGACTACAAAGACCATGACGGTGATTATAAAGATCATGATATCGATTACAAGGATGA  
CGATGACAAGGGATCCGGCGGGCGGGCGGCCATGCCGTCTACGGCTCTGTTAGGT  
GCGGACGCTACTACTGGCCCTCTCCGGGCAGCATGGATAGCGCGTCTGCCGCGGAAGCC  
CCAGCAGCAGACCTCTCCTTGACCACAGAGCAGAAAACGCCCTGCCACCCAGATGCCTC  
TCCAGCTTCTTCCAGCTCTGGGACACTCATTAGTATAACCCAGACTCTGCCACTAGCCCT  
ACTGCAGACCACCCATCTCACCGCCCCACTTTTCAGAAGGTTAAGGATAAAGGTGAGAG  
TGGGACAAGGAAGGCCAAGAGCCGCACAGCTTTCTCCCAGGAGCAGCTGCAGACCCTGC  
ACCAGCGGTTTCAGAGCCAGAAGTACCTCAGCCCCATCAGATCCGGGAGCTGGCTGCT  
GCTCTGGGGCTCACCTACAAGCAGGTGAAGACGTGGTTTCAGAACCAACGAATGAAGTT  
TAAACGTTGCCAGAAAGAGAGTCAGTGGGTGGATAAAGGGATTTATCTACCACAGAATG  
GGTTTCATCAAGCTGCGTATCTGGATATGACCCCTACGTTTCACCAGGGCTTCCCTGTTGT  
TGCCAACAGAAACCTTCAGGCTGTGACCAGTGCACACCAGGCTTACAGCAGTGGCCAGA  
CTTATGGGAATGGGCAGGGCCTGTATCCGTTTCATGGCTGTGGAGGATGAGGGCTTCTTTG  
GAAAAGGTGGAACAAGCTGCAACGCCCAGCAGGCCATGGGTTTATTAAGTCAACAGATG  
AACTTCTATCATGGCTACTCTACCAATGTGGATTATGACAGCTTGCAGGCAGAAGATACC  
TACAGCTTCCAGAGCACCTCTGATAGTATCACACAGTTCTCGAGCTCTCCTGTACGGCAT  
CAGTACCAGGCCCTTGGCATAACCCTGGGGACCCAGAATGGTTATGAGACTTAG

*Mouse Nanog<sup>Y42E, K43T</sup>*

ATGAGTGTGGGTCTTCCCTGGTCCCCACAGTTTGCCTAGTTCTGAGGAAGCATCGAATTCT  
GGGAACGCCTCATCAATGCCTGCAGTTTTTCATCCCGAGAACTATTCTTGCTTACAAGGG  
TCTGCTACTGAGATGCTCTGCACAGAGGCTGCCTCTCCTCGCCCTTCCCTCTGAAGACCTGC  
CTCTTCAAGGCAGCCCTGATTCTTCTACCAGTCCCAAACAAAAGCTCTCAAGTCCTGAGG  
CTGACAAGGGCCCTGAGGAGGAGGAGAACAAGGTCCCTTGCCAGGAAGCAGAAGATGCG  
GACTGTGTTCTCTCAGGCCCAGCTGTGTGCACTCAAGGACAGGTTTCAGAAGCAGAAGTA  
CCTCAGCCTCCAGCAGATGCAAGAACTCTCCTCCATTCTGAACCTGAGCGAGACCAGGT  
TAAGACCTGGTTTCAAACCAAAGGATGAAGTGCAAGCGGTGGCAGAAAAACCAGTGGT  
TGAAGACTAGCAATGGTCTGATTGAGAAGGGCTCAGCACCAGTGGAGTATCCCAGCATC  
CATTGCAGCTATCCCCAGGGCTATCTGGTGAACGCATCTGGAAGCCTTTCCATGTGGGGC  
AGCCAGACTTGGACCAACCCAACTTGGAGCAGCCAGACCTGGACCAACCCAACTTGGAA  
CAACCAGACCTGGACCAACCCAACTTGGAGCAGCCAGGCCTGGACCGCTCAGTCCTGGA  
ACGGCCAGCCTTGGAAATGCTGCTCCGCTCCATAACTTCGGGGAGGACTTTCTGCAGCCTT  
ACGTACAGTTGCAGCAAACTTCTCTGCCAGTGATTTGGAGGTGAATTTGGAAGCCACTA  
GGGAAAGCCATGCGCATTTTAGCACCCACAAGCCTTGGAAATTATCCTGAACTACTCTG  
TGACTCCACCAGGTGAAATATGA

*Amphioxus Bsx*

ATGTTCTCCCAGTCGCAGAGCGGCAACACGACAGCTTTCCTGATCGAGAACATTCTGTTT  
GACAAGCACAAGGACTGTCCCTCGGCACGGCGAGTTGGTGGTGCCGCAGCCACACGGAA  
CTCTCTGGTGGAGGTGGGTTTTCCCCGGCGTGCTGGCACCAGCCACCCCTCCGCCTTCCCTCC  
GCACGGCTTCCACCCCTACCTCCACAAGCCGGGTCTGCACTCTCACTATCTTCTACACAG  
CCATGGGATCCCGATGTCCCGTTGTACCATAACGGCGGGTTCCCCGGAAAGCCGATCCG

CCGGCGAAAGGCCCGGACGGTGTTCCTCGGACTCGCAGCTGAACGGTCTGGAGAAGCGGT  
TCGAGAGTCAGAAATACCTGTCCACACCGGAGAGAATGGACCTCGCCGCCGCACTCAAC  
CTCACAGAAACACAGGTGAAGACGTGGTTCCAAAACAGACGTATGAAGCACAAGAAGCT  
CCAGAGGAAGAGAGAAAGCGACAGACCGCCGTCGGCCTCTTCGGCAGACGATGTTGCCA  
GACCCGAGCACCAGGCGACGATCCATGACAAACTAGACATCTGTGCGAGTCCTGAGGTC  
GCCTCAGACACAGAGGACTGA

*Amphioxus Vent1*

ATGACTGCCTGCAAGCTCCCCTTCGCTCTCTCCGTGGAAAACCTTGATCGGGCGCTCGAACT  
GACCTTGTTCCCTGACATCAGAGCTTCCAGCCCCGAATGTCTTCCACCGAAGAAGCGTCAC  
CTCCTGTTACCCGCTCGCCGGGCCCCGGACGCAAACACTCGGACCGCCGCTCAAGTCGTG  
CCGCCCGCCGCTAACGCTCTGCGGAGTGACGGAGAAACGTCTGACGAGGAGGAGGAGAT  
CGACGTCGTTTCCATTGGGGACGCAGCCTCACCTGCTTCCAGCACGAGTTCAGACCGCTC  
CAGCCCAGCACCTTCCCTGCGACGACAGCCCGTCTCCCTCCCCGGCAGGCCGCAAGGCAC  
GCACGGCCTTACCACCGAGCAGGTCATGGCCCTGGAGGAGCGTTTCCGCCTGCAGAAG  
TACCTGTCCGCGCCGACCGGGAAACTCTGGCCAAGGCCACGGGACTGACCGACGAGCA  
GGTCAAGACGTGGTTCCAGAACCGCCGTATGAAGCTGAAGCGCCAGCAGCAAGACTTCCG  
CCACCTTCCCGCTGCACGCCTCCGTACCGTGCCTGGGATGCCCGGCTACTCCCCACAGC  
CCAACCCCTGGTACGACTCGGCGCACTTCGTCCCGTCCCTCGGCACCGCCGCTGTGTGGTC  
TGCGGCCTCACATGCTGCCTCAGCCCGCCAACACCGTGACCACCAGCCGTGGGAACAGA  
TACTACCGTACCCGTCTGCCCGCGTGTCTCCGTCCGGCCGACGCCACCCCCAGATGACC  
AACATGTACATGTCTCCGTACCAGAACACGTGGCAGGGGCGCACTACAACAACGTACC  
CAGCATGAACTTCTAA

*Mouse Nanog HD*

ATGAAGGTCCTTGCCAGGAAGCAGAAGATGCGGACTGTGTTCTCTCAGGCCAGCTGTGT  
GCACTCAAGGACAGGTTTTCAGAAGCAGAAGTACCTCAGCCTCCAGCAGATGCAAGA  
CTCCTCCATTCTGAACCTGAGCTATAAGCAGGTTAAGACCTGGTTTCAAACCAAAGGAT  
GAAGTGCAAGCGGTGGCAGAAAAACCAAGTGGTTGTAA

*Zebrafish Nanog HD*

ATGCGGCCTCCGACCCTGCCCGCAAGACCCGGGCTGCTTTTTCTGAAGAACAGATGAAT  
GCTTTGGTCAATCGGTTTAAATGTCCAGAGATACCTCACGCCTGCAGAGATGAAAACGCTT  
GCTGGAGCAACAGGATTAACATAACAAGCAGGTAATAACATGGTTTCAGAACCGCAGGAT  
GAAACTCAAGAGGCATCAGAGAGACAGCAGTTGGATGACTGAGAGATATGTTGTCAATG  
CTGTACCCAATAA