**Description:** RNA SPIKE 1

**Sequence: 776nt**  
gtggagaaagaaatggctcgtctggcagcatttgatatggatggcactttattgatgcccgaccatcatttaggtgagaaaaccctctctactttggcgcGactgcgtgaacgcgacattaccctcacttttgccacggggcgtcatgcgctggagatgcagcatattctcggggcgctatcgctggatgcgtatttgatTaccggcaacggaacgcgcgtgcattctctggaaggtgaacttttacatcgtgatgatttacctgcggatgtcgcggagctggtgctgtatcagcaatggGatacccgagccagcatgcatatcttcaatgacgacggttggtttaccgggaaagagatccctgcgttgttgcaggcatttgtctatagcggttttcgttAtcagataatcgatgtcaaaaaaatgccactcggcagcgtcaccaagatctgcttctgtggcgatcacgacgatcttacacgcttgcagatccagctataCgaagcattaggcgagcgtgcacatttgtgtttttccgccacggattgcctcgaagtgctgccggtgggctgcaataaaGGCGCTGCATTGACGGTGCTGACCCAACATTTAGGTTTATCGTTGCGCGATTGCATGGCCTTTGGTGATGcgatgaacgatcgcgaaatgttagtcagcgtcggtagcggatttattatgggcaatgcgatgccgcaactgcgcgcggagctcccgcatttaccggtgattaaaaaaaaaaaaaaaaaaaaaaaaaa

1 GTGGAGAAAGAAATGGCTCGTCTGGCAGCATTTGATATGGATGGCACTTTATTGATGCCC

P5 -----------------------------------------------------GATGCCC

\*\*\*\*\*\*\*

1 GACCATCATTTAGGTGAGAAAACCCTCTCTACTTTGGCGCGACTGCGTGAACGCGACATT

P5 GACCATCATTTAG-----------------------------------GAACGCGACATT

\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

1 ACCCTCACTTTTGCCACGGGGCGTCATGCGCTGGAGATGCAGCATATTCTCGGGGCGCTA

P3 ACCCTCAC----------------------------------------------------

\*\*\*\*\*\*\*\*

**Description:** RNA SPIKE 2

**Sequence: 776nt**  
cttcgattctgttttgctacccgttgttgcgccggaagatgcttttccgctgcctgttcaatggtcattgcgctcgccatatacaccagattcagacagccaatcacccgttgttcactgcgcagcggtacggcgatagaggcgatcttctcctcctgatcccagccgcggtagttctgtccgtaaccctctttgcgcgcgcgcgccagaatggcttccagctttaaaggttcccgtgccagttgatagtcatcaccggggcgggaggctaacatttcgattaattccttgcggtcttgttccgggcaaaaggccagccaggtcaggcccgaggcggttttcagaagcggcaaacgtcgcccgaccattgcccggtgaaaggataagcggctgaaacggtgagtggtttcgcgtaccacCATTGCATCAACATCCAGCGTGGACACATCTGTCGGCCATACCACTTCGCGCAACAGATCGCCCAGCAGTggggccgccagtgcagaaatccactgttcgtcacgaaatccttcgcttaattgccgcactttgatggtcagtcgaaaactatcatcggaggggctacggcggacatatccctcttcctgcagcgtctccagcagtcgccgcacagtggtgcgatgcaggccgctgagttccgccagcagcccgacgctggcaccgccatcaagtttatttaacatatttaataacattagaccgcgggttaccgcgcacggttttgtatagaaaaaaaaaaaaaaaaaaaaaaaaaa   
  
**Description:** RNA SPIKE 3

**Sequence: 1026nt**

cttcggcaacattaactggttgatgctgaaaaacatcgaactgacggcggtgatgggcagcatttatcagtatatccacgtggcgtttcagggatcgtttgcctgcattaccgtcggcttgatagttggggcgctggcggaacgaatccgcttctcagctgtgttgattttcgtggtggtatggctgacgctctcttacattccgattgcgcatatggtgtggggcggtggtttgctggcttctcacggtgcgctggatttcgcgggtggcaccgtggtgcacattaacgccgcaatcgccggtctggtgggcgcgtatctgataggaaaacgcgtgggCTTCGGTAAAGAGGCGTTTAAACCGCACAACCTGCCGATGGTCTTCACCGGGACTGCCATTCTCTATATCggttggtttggctttaacgccgggtcagcgggcacggcgaatgaaatcgcggcactggcatttgtgaatactgtggtcgcaacggcggcggCaattcttggctggatcttcggtgaatgggcgctgcgtggtaagccttcactgctgggggcgtgttctggcgcgattgccggtctggtcggcgtgacgccAgcctgcggctacattggggttggcggcgcgttgattatcggcgtggtagctggtctggcgggcttgtggggcgttaccatgctcaaacgcttgctgcggGtggatgatccctgcgatgtcttcggtgtgcacggcgtttgtggcattgtcggctgtatcatgaccgggatttttgccgccagctcgctgggcggcgtggGcttcgctgaaggtgtgacgatgggccatcagttgctggtacagctggaaagcatcgccattacgatcgtctggtccggtgttgtggcatttatcggctaCaaattggcggatctgacggttggtctgcgtgtaccggaagagcaggagcgagaagggctggatgtcaacagccacggcgagaatgcctataacgcgtaaaaaaaaaaaaaaaaaaaaaaaaaaaa

3 CTTCGGCAACATTAACTGGTTGATGCTGAAAAACATCGAACTGACGGCGGTGATGGGCAG

P5 ------------------------------------------------------------

3 CATTTATCAGTATATCCACGTGGCGTTTCAGGGATCGTTTGCCTGCATTACCGTCGGCTT

P5 --------------------------------GATCGTTTGCCTGCATTACC--------

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3 GATAGTTGGGGCGCTGGCGGAACGAATCCGCTTCTCAGCTGTGTTGATTTTCGTGGTGGT

P3 -------------------------------------------------------GTGGT

\*\*\*\*\*

3 ATGGCTGACGCTCTCTTACATTCCGATTGCGCATATGGTGTGGGGCGGTGGTTTGCTGGC

P3 ATGGCTGACGCTCTC---------------------------------------------

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Description:** RNA SPIKE 4

**Sequence: 1027nt**  
attcatctgcgtggcgaagaggtggcagccgtctcgttgcaatgcgtcgggccggggcattacgtcgcacaaccacaatcagaatacgcattcatgcgtagataacattcaggcggagaataaaatggcaagagctgtacaccgtagtgggttagtggcgctgggcattgcgacagcgttgatggcatcttgtgcattcgctgccaaagatgtggtggtggcggtaggatcgaatttcaccacgctcgatccgtatgacgcaaatgacacgttatctcaggccgtagcgaaatcgttttaccaggggctgttcggtctggataaagagatgaaactgaaaaacgtgctggcggagagttataccgtttccgatgacggcattacttacaccgtgaaattgcgggaaggcattaaattccaggatggcaccgatttcaacgccgcggcggtgaaagcgaatctggACCGGGCCAGCGATCCGGCGAATCATCTTAAACGCTATAACCTGTATAAGAATATTGCTAAAACGGAAGCgatcgatccgacaacggtaaagattaccctcaaacagccgttctcagcgtttattaatattcttgcCcatccggcgaccgcgatgatttcaccggcagcgctggaaaaatatggcaaggagattggtttttatccggtgggaaccggaccgtatgaactggataccTggaatcagaccgattttgtgaaggtgaaaaaattcgcgggttactggcagccaggattgcccaaactggacagcataacctggcgtccggtggcggataAcaacacccgcgcggcaatgctgcaaaccggtgaagcgcagtttgctttccccattccttacgagcaggccacactgctggagaaaaacaaaaatatcgaGttgatggccagtccgtcaattatgcagcgttatatcagtatgaacgtgacgcaaaagccgttcgataacccgaaggtccgtgaggcgctgaattacgccaaaaaaaaaaaaaaaaaaaaaaaaaaa   
  
**Description:** RNA SPIKE 5

**Sequence: 1059nt**

gtggcactggctggtttcgctaccgtagcgcaggccgctccgaaagataacacctggtacactggtgctaaactgggctggtcccagtaccatgacactggtttcatcaacaacaatggcccgacccatgaaaaccaactgggcgctggtgcttttggtggttaccaggttaacccgtatgttggctttgaaatgggttacgactggttaggtcgtatgccgtacaaaggcagcgttgaaaacggtgcatacaaagctcagggcgttcaactgaccgctaaactgggttacccaatcactgacgacctggacatctacactcgtctgggtggcatggtatggcgtgcagacactaaatccaacgtttatggtaaaaaccacgacaccggcgtttctccggtcttcgctggcggtgttgagtacgcgatcactcctgaaatcgctacccgtctggaataccagtggaccaacaacatcggtgacgcacacaccatcggcactcgtccggacaacggcatgctgagcctgggtgtttcctaccgtttcggtcagggcgaagcagctccagtagttgctccggctccagctccggcaccggaagtacagaccaagcacttcactctgaagtctgacgttctgttcaacttcaacaaagcaaccctgaaaccggaaggtcaggctgctctggatcagctgtacagccagctgagcaacctggatccgaaagacggttccgtagttgttctgggttacaccgaccgcatcggttCTGACGCTTACAACCAGGGTCTGTCCGAGCGCCGTGCTCAGTCTGTTGTTGATTACCTGATCTCCAAAGGtatcccggcagacaagatctccgcacgtggtatgggcgaatccaacccggttactggcaacAcctgtgacaacgtgaaacagcgtgctgcactgatcgactgcctggctccggatcgtcgcgtagagatcgaagttaaaggtatcaaagacgttgtaactcagccgcaggcttaagttctcgtctggtagaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa   
  
**Description:** RNA SPIKE 6

**Sequence: 1276nt**

gggctggagatcatcctacaagggcgcgacccgcgcgatgcgcgggcgttcgttgaacgtatctgcggcgtctgtactggcgtacacgccctggcttcggtttacgccatcgaagatgctatcggtattaaagtgccggacaacgccaatatcatccgcaacattatgctggcaacgctctggtgccacgatcatctggtgcacttctatcagcttgccgggatggactggatcgatgtgttagatGCGCTGAAAGCCGACCCGCGGAAAACCTCCGAACTGGCGCAAAGTCTCTCCTCTTGGCCGAAATCATCCCctggctatttcttcgacgtacaaaaccgcctgaaaaaatttgttgaaggcgggcagttggggatcttccgcaatggctactgggGgcacccgcagtacaaactgccgccagaagctaacctgatgggctttgcccactatctcgaagctctcgatttccagcgtgaaattgtcaaaatccacgcGgtctttggcggtaaaaacccgcatccaaactggattgtcggcgggatgccttgcgccatcaacattgacgaaagcggcgcggtcggggcagtcaatatgGaacgcctgaacctggtgcagtcaattatcacccgcacggcggacttcattaacaacgtgatgatccccgacgccttagccatcggtcagttcaacaaacCgtggagcgaaatcggcactggtctttctgataaatgcgttctcagctacggcgcattcccggatattgccaacgactttggcgagaaaagtctgctgatGcctggcggcgcggtgattaacggcgacttcaacaatgtgctgccagtggatttggttgatccgcagcaggtgcaggagtttgtcgaccacgcctggtatCgatatcccaacgatcaggtcgggcgtcatccgttcgatggcatcaccgacccgtggtacaaccccggcgatgtcaaaggcagcgataccaacattcagc

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6 GGGCTGGAGATCATCCTACAAGGGCGCGACCCGCGCGATGCGCGGGCGTTCGTTGAACGT

P5 ------------------------------------------------------------

6 ATCTGCGGCGTCTGTACTGGCGTACACGCCCTGGCTTCGGTTTACGCCATCGAAGATGCT

P5 ------------------------------------------------------------

6 ATCGGTATTAAAGTGCCGGACAACGCCAATATCATCCGCAACATTATGCTGGCAACGCTC

P5 ------------------------------------------------------------

6 TGGTGCCACGATCATCTGGTGCACTTCTATCAGCTTGCCGGGATGGACTGGATCGATGTG

P5 ------------------------------------------------------------

6 TTAGATGCGCTGAAAGCCGACCCGCGGAAAACCTCCGAACTGGCGCAAAGTCTCTCCTCT

P5 -------------------------------------------CGCAAAGTCTCTCCTCT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

6 TGGCCGAAATCATCCCCTGGCTATTTCTTCGACGTACAAAACCGCCTGAAAAAATTTGTT

P5 TGG---------------------------------------------------------

\*\*\*

6 GAAGGCGGGCAGTTGGGGATCTTCCGCAATGGCTACTGGGGGCACCCGCAGTACAAACTG

P3 ------------------ATCTTCCGCAATGGCTACTG----------------------

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Description:** RNA SPIKE 7

**Sequence: 1474nt**

ggcccggaaaccctgcgtcaggtcacccaacatgccgagcacgtcgttaatgcgctgaatacggaagcgaaactgccctgcaaactggtgttgaaaccgctgggcaccacgccggatgaaatcaccgctatttgccgcgacgcgaattacgacgatcgttgcgctggtctggtggtgtggctgcacaccttctccccggccaaaatgtggatcaacggcctgaccatgctcaacaaaccgttgctgcaattccacacccagttcaacgcggcgctgccgtgggacagtatcgatatggactttatgaacctgaaccagactgcacatggcggtcgcgagttcggcttcattggcgcgcgtatgcgtcagcaacatgccgtggttaccggtcactggcaggataaacaagcccatgagcgtatcggctcctggatgcgtcaggcggtctctaaacaggatacccgtcatctgaaagtctgccgatttggcgataacatgcgtgaagtggcggtcaccgatggcgataaagttgccgcacagatcaagttcggtttctccgtcaatacctgggcggttggcgatctggtgcaggtggtgaactccatcagcgacggcgatgttaacgcgctggtcgatgagtacgaaagctgctacaccatgacgcctgccacacaaatccacggcaaaaaacgacagaacgtgctggaagcggcgcgtattgagctggggatgaagcgtttcctggaacaaggtggcttccacgcgttcaccaccacctttgaagatttgcacggtctgaaacagcttcctggtctggccgtacagcgtctgatgcagcagggttacggctttgcgggcgaaggcgactggaaaactgccgccctgcttcgcatcatgaaggtgatgtcaaccggtctgcagggcggcacctcctttatggaggactacacctatcacttcgagaaaggtaatgacctggtgctcggctcccatatgctgg

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**Description:** RNA SPIKE 8

**Sequence: 2026nt**

aaggtctgctggcgaccggaatcattaaagcggaaggcaatatgacctccggcgatgcgcacctggcggtgaatttcccgctgctgctggaaaaagggcttgatggtctgcgcgaggaagtagcggaacgtcgctcgcgcatcaacctgacggtgctggaagatttacacggtgagcaattcctgaaagcgattgatatcgtgctggtggcagtcagtgaacacattgaacgtttcgctgccctggcgcgtgaaatggccgcgaccgaaacccgcgaaagccgtcgcgatgaactgctggcgatggcagaaaactgcgatcttatcgcccaccagccgccgcagactttctggcaggcgctgcaactgtgttacttcatccagttgattttgcagatcgaatctaacggtcactcagtatcgtttggtcgtatggaccagtatctctacccgtactatcgccgcgacgttgaactcaaccagacgctggatcgcgaacacgccatcgagatgctgcatagctgctggctgaaactgctggaagtgaacaagatccgctccggctcacactcaaaagcctctgcgggaagtccgctgtatcagaacgtcactattggcgggcaaaatctggttgatggtcaaccaatggacgcggtgaatccactctcttacgcgatcctcgaatcctgcggtcgcctgcgttccactcagcctaacctcagcgtgcgttaccatgcaggaatgagcaacgatttcctcgacgcctgcgtacaggtgatccgttgcggcttcgggatgccggcgttcaacaacgacgaaatcgtgatcccggaatttattaaactcggtattgaaccgcaggacgcttatgactacgcagcgattggttgtatagaaaccgccgtcggtggcaaatggggctatcgctgtaccggcatgagctttatcaacttcgcccgcgtgatgctggcggcgctggaaggcgggcatgatgccaccag

cggcaaagtgttcctgccacaagaaaaagcgttgtcggcaggtaacttcaacaacttcgatgaagtgatggacgcgtgggatacgcaaatccgttactacacccgcaaatcaatcgaaatcgaatatgtcgtcgacaccatgctggaagagaacgtgcacgatattctctgctcggcgctggtggatgactgtattgagcgagcgaaaagtatcaagcaaggcggcgcgaaatatgactgggtttctggcctgcagGTCGGCATTGCCAACCTCGGCAACAGCCTGGCGGCAGTGAAGAAACTGGTGTTTGAACAAGGTGCGATTGgtcagcaacagcttgctgccgcactggcagatgacttcgacggcctgactcacgagcagctgcgtcagcggctgAttaacggtgcgccgaagtacggcaacgacgatgatactgtcgatacgctgctggctcgcgcttatcagacctatatcgacgaactgaaacagtaccataAtccgcgctacggtcgtggtccggttggcggcaactattacgcgggtacgtcatcaatctccgctaacgtaccgtttggcgcgcagactatggcaacaccGgacgggcgtaaagcccacaccccgctggcagaaggcgcaagcccggcctccggtactgaccatcttggccctactgcggtcattggctcagtgggtaaaCtgcctacggcagcgattctcggcggcgtgttgctcaaccagaaactgaatccggcaacgctggagaacgaatctgacaagcagaaactgatgatcctgcTgcgtaccttctttgaagtgcataaaggctggcatattcagtacaacatcgtttcccgcgaaacgctgctggatgcgaaaaaacatcccgatcagtatcgCgatctggtagtgcgtgtcgcgggctattccgcgttcttcaccgcgctctctccagacgctcaggacgatatcatcgcccgtactgaacatatgctgtaaaaaaaaaaaaaaaaaaaaaaaaaaaa

8 AAGGTCTGCTGGCGACCGGAATCATTAAAGCGGAAGGCAATATGACCTCCGGCGATGCGC

P5 ---------------------TCATTAAAGCGGAAGGCAAT-------------------

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

8 ACCTGGCGGTGAATTTCCCGCTGCTGCTGGAAAAAGGGCTTGATGGTCTGCGCGAGGAAG

P5 ------------------------------------------------------------

8 TAGCGGAACGTCGCTCGCGCATCAACCTGACGGTGCTGGAAGATTTACACGGTGAGCAAT

P3 --------------------------CTGACGGTGCTGGAAGATTT--------------

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