

Supplementary Figure 1. Targets can prediction of miR-488 binding site in POMC.

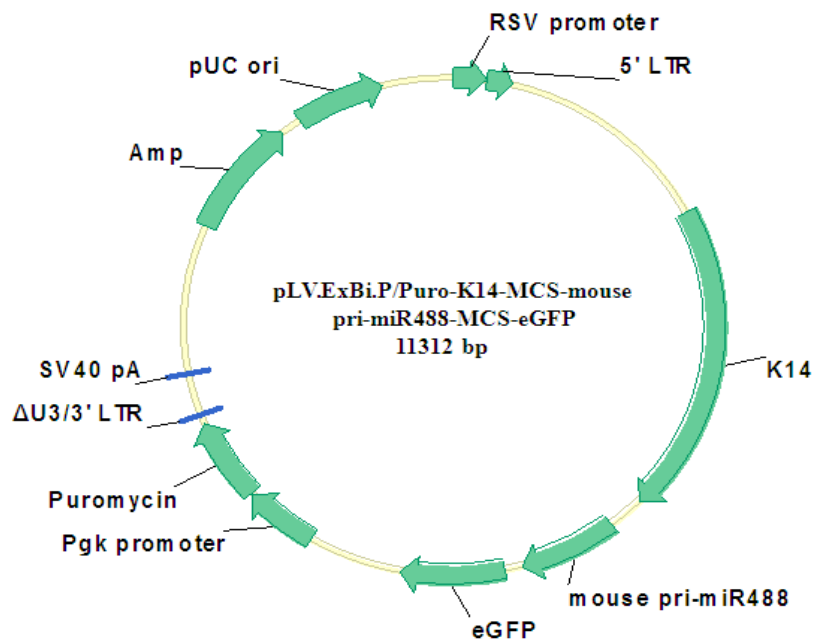
Supplementary Figure 2. Construction and sequences of pLV.ExBi.P/Puro-K14-MCS-mouse pri-miR488-MCS-eGFP.

Vector Map and full sequence.

1. Summary

Vector Name	pLV.ExBi.P/Puro-K14-MCS-mouse pri-miR488-MCS-eGFP
Vector Type	Mammalian expression
Vector Backbone	pLV.Des3d.P/Puro
Expression Pattern	Bicistronic
Selectable Marker	Puromycin
Bacterial Resistance	Ampicillin
Promoter	K14
Gene	mouse pri-miR488
Gene Size	684 bp

2. Vector Map



**3. Full Sequence**

1 AATGTAGTCT TATGCAATAC TCTTGTAGTC TTGCAACATG GTAACGATGA GTTAGCAACA  
 61 TGCCTTACAA GGAGAGAAAA AGCACCGTGC ATGCCGATTG GTGGAAGTAA GGTGGTACGA  
 121 TCGTGCCTTA TTAGGAAGGC AACAGACGGG TCTGACATGG ATTGGACGAA CCACTGAATT  
 181 GCCGCATTGC AGAGATATTG TATTTAAGTG CCTAGCTCGA TACATAAACG GGTCTCTCTG  
 241 GTTAGACCAG ATCTGAGCCT GGGAGCTCTC TGGCTAACTA GGAACCCAC TGCTTAAGCC  
 301 TCAATAAAGC TTGCCTTGAG TGCTTCAAGT AGTGTGTGCC CGTCTGTTGT GTGACTCTGG  
 361 TAACTAGAGA TCCCTCAGAC CCTTTTAGTC AGTGTGAAA ATCTCTAGCA GTGGCGCCCG  
 421 AACAGGGACT TGAAAGCGAA AGGGAAACCA GAGGAGCTCT CTCGACGCAG GACTCGGCTT  
 481 GCTGAAGCGC GCACGGCAAG AGGCGAGGGG CGGCGACTGG TGAGTACGCC AAAAAATTTG  
 541 ACTAGCGGAG GCTAGAAGGA GAGAGATGGG TGCAGAGCG TCAGTATTAA GCGGGGAGA  
 601 ATTAGATCGC GATGGGAAAA AATTCGGTTA AGGCCAGGGG GAAAGAAAA ATATAAATTA  
 661 AAACATATAG TATGGGCAAG CAGGGAGCTA GAACGATTCG CAGTTAATCC TGGCCTGTTA  
 721 GAAACATCAG AAGGCTGTAG ACAAATACTG GGACAGCTAC AACCATCCCT TCAGACAGGA  
 781 TCAGAAGAAC TTAGATCATT ATATAATACA GTAGCAACCC TCTATTGTGT GCATCAAAGG  
 841 ATAGAGATAA AAGACACCAA GGAAGCTTTA GACAAGATAG AGGAAGAGCA AAACAAAAGT  
 901 AAGACCACCG CACAGCAAGC GGCCGCTGAT CTTGAGACCT GGAGGAGGAG ATATGAGGGA  
 961 CAATTGGAGA AGTGAATTAT ATAAATATAA AGTAGTAAAA ATTGAACCAT TAGGAGTAGC  
 1021 ACCCACCAAG GCAAAGAGAA GAGTGGTGCA GAGAGAAAA AGAGCAGTGG GAATAGGAGC  
 1081 TTTGTTCCCTT GGGTTCTTGG GAGCAGCAGG AAGCACTATG GCGCAGCGT CAATGACGCT  
 1141 GACGGTACAG GCCAGACAAT TATTGTCTGG TATAGTGCAG CAGCAGAACA ATTTGCTGAG  
 1201 GGCTATTGAG GCGCAACAGC ATCTGTTGCA ACTCACAGTC TGGGGCATCA AGCAGCTCCA  
 1261 GGCAAGAATC CTGGCTGTGG AAAGATACCT AAAGGATCAA CAGCTCCTGG GGATTTGGGG  
 1321 TTGCTCTGGA AAACATTTT GCACCACTGC TGTGCCTTGG AATGCTAGTT GGAGTAATAA  
 1381 ATCTCTGGAA CAGATTTGGA ATCACACGAC CTGGATGGAG TGGGACAGAG AAATTAACAA  
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 1501 ACAAGAATTA TTGGAATTAG ATAAATGGGC AAGTTTGTGG AATTGGTTTA ACATAACAAA  
 1561 TTGGCTGTGG TATATAAAAT TATTCATAAT GATAGTAGGA GGCTTGGTAG GTTTAAGAAT  
 1621 AGTTTTTGCT GTACTTTCTA TAGTGAATAG AGTTAGGCAG GGATATTCAC CATTATCGTT  
 1681 TCAGACCCAC CTCCCAACCC CGAGGGGACC CGACAGGCC GAAGGAATAG AAGAAGAAGG  
 1741 TGGAGAGAGA GACAGAGACA GATCCATTCG ATTAGTGAAC GGATCTCGAC GGTATCGCTA  
 1801 GCTTTTAAAA GAAAAGGGGG GATTGGGGGG TACAGTGCAG GGGAAAGAAT AGTAGACATA  
 1861 ATAGCAACAG ACATACAAAC TAAAGAATTA CAAAAACAAA TTACAAAAAT TCAAAATTTT  
 1921 ACTAGTATCA ACTTTGTATA GAAAAGTTGA GGCTTATATT CCATGCTAGG GTTCTGGTGT  
 1981 TGGTGCCTGG GGTGGGGTG GACTGCAGA AGTGCCTTTT AAGATTATGT GATTGACTGA  
 2041 TCTGTCATTG GTTCCCTGCC ATCTTTATCT TTTGGATTCC CCTCGGAGGA GGGGGAGGAA  
 2101 GGAGTTTCTT TTGGGTTTTA TTGAATGAAA TGAAAGGGAA AGTAGAGCTG TTCCTATGTC

2161 CCGGGCTCCG GAGCTTCTAT TCCTGATCCC TGCATAAGAA GGAGACATGG TGGTGGTGGT  
 2221 GGTGGGTGGG GGTGGTGGGG CACAGAGGAA GCCGGTACTG GGCTCTGCAC CCCATTCCCG  
 2281 CTCCCAGATC CCTCTGGACA CAGCATTTTT CTCCAGTGAG CACAGCCTCC CTTTGCCCA  
 2341 CAGCCAACAG CAACATGCCT CCCAACAAAA GCATCTGTCC CTCAGCCAAA ACCCCTGTTG  
 2401 CCTCTCTCTG GGGAAATTGT AGGGCTGGGC CAGGGTGGGG GGACCATTCT CTGCAGGGAG  
 2461 ATTAGGAGTG TCTGTCAGGG GCGGGTGGAG CGGGGTGGGG CCCTGGCTTA CTCACATCT  
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9061 ACGCGAATTT TAACAAAATA TTAACGCTTA CAATTTAGGT GGCACITTTTC GGGGAAATGT  
9121 GCGCGGAACC CCTATTTGTT TATTTTTCTA AATACATTCA AATATGTATC CGCTCATGAG  
9181 ACAATAACCC TGATAAATGC TTCAATAATA TTGAAAAAGG AAGAGTATGA GTATTCAACA  
9241 TTTCCGTGTC GCCCTTATTC CCTTTTTTGC GGCATTTTGC CTTCCTGTTT TTGCTCACCC  
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9661 GCTAACCGCT TTTTTGCACA ACATGGGGGA TCATGTAACT CGCCTTGATC GTTGGGAACC  
9721 GGAGCTGAAT GAAGCCATAC CAAACGACGA GCGTGACACC ACGATGCCTG TAGCAATGGC  
9781 AACAACGTTG CGCAAATAT TAACTGGCGA ACTACTTACT CTAGCTTCCC GGCAACAATT  
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10561 GCAGCGGTCG GGCTGAACGG GGGGTTCGTG CACACAGCCC AGCTTGAGC GAACGACCTA  
10621 CACCGAACTG AGATACCTAC AGCGTGAGCT ATGAGAAAGC GCCACGCTTC CCGAAGGGAG  
10681 AAAGCGGAC AGGTATCCGG TAAGCGGCAG GGTGGAACA GGAGAGCGCA CGAGGGAGCT  
10741 TCCAGGGGGA AACGCCTGGT ATCTTTATAG TCCTGTCGGG TTTCCGCCACC TCTGACTTGA  
10801 GCGTCGATTT TTGTGATGCT CGTCAGGGG GCGGAGCCTA TGAAAAACG CCAGCAACGC  
10861 GGCCTTTTTA CGGTTCTTGG CCTTTTGCTG GCCTTTTGCT CACATGTTCT TTCCTGCGTT  
10921 ATCCCCTGAT TCTGTGGATA ACCGTATTAC CGCCTTTGAG TGAGCTGATA CCGCTCGCCG  
10981 CAGCCGAACG ACCGAGCGCA GCGAGTCAGT GAGCGAGGAA GCGGAAGAGC GCCCAATACG  
11041 CAAACCGCCT CTCCCCGCGC GTTGCCGAT TCATTAATGC AGCTGGCAGC ACAGGTTTCC  
11101 CGACTGGAAA GCGGGCAGTG AGCGCAACGC AATTAATGTG AGTTAGCTCA CTCATTAGGC  
11161 ACCCCAGGCT TTACTTTTA TGCTTCCGGC TCGTATGTTG TGTGGAATTG TGAGCGGATA  
11221 ACAATTTTAC ACAGGAAACA GCTATGACCA TGATTACGCC AAGCGCGCAA TTAACCTCA  
11281 CTAAAGGGAA CAAAAGCTGG AGCTGCAAGC TT

**Note:** K14 sequence in red, mouse pri-miR488 sequence in blue, eGFP sequence in green, MCS are highlighted in yellow.

**stem-loop sequence mmu-mir-488 (MI0004633)**

UUCGGGUGAGAGUGAGAAUCCUCUCUCCAGAUAAUAGCACUCUCAAAACAAGUUUCCAUGUUGUUUGAAAGGCUGUUU-  
CUUGGUCAGAAGACUCUCAAUUUCUUCUGGA

**mature sequence mmu-miR-488-3p (MIMAT0003450)**

UUGAAAGGCUGUUUCUUGGUC

**Table S1.** Primer sequences for PCR.

Gene	Primers (5'→3')
POMC	F:CACTTCCGCTGGGGCAAGCCG R:TAGCGCTTGTCTTGGGCGGG
$\beta$ -actin	F:TTGCTGACAGGATGCAGAAG R:ACATCTGCTGGAAGGTGGAC
miR-488	RT:CTCAACTGGTGTCTGGAGTC GGCAATTCAGTTGAGGACCAAGA F:ACACTCCAGCTGGGTTGAAAGGCTGTTTC R:TGGTGTCGTGGAGTCG
U6	F:CTCGCTTCGGCAGCACA R:AACGCTTCACGAATTTGCGT