

Supplementary Table 1. Primers for mir-279/996 rescue constructs and sensor constructs		
generation of 3.4kb rescue construct		NOTE
NotI-mir279-3.4k-Fwd	ATAAGAATGCGGCCGCTGAAAATACGCGTATGGAATGCC	
BglII-mir279-3.4k-Rev	GAAGATCTCAGAATCGGAATCGGAATCAG	
generation of 16.6kb wild type construct		
Asc-16.6kb-5'LA-Fwd	TTGGCGCGCCGCCATTTTCGGTCGGATTACG	
BamH-16.6kb-5'LA-Rev	AGCAGCGAACTATGTTAAGATGGAAGGGATCCCATCCTGCCTTCTCTGTAGTTCAG	~600bp left arm
BamH-16.6kb-3'RA-Fwd	CTGGAACACAGAGAAGGCAGGATGGGATCCCTCCATCTTAACATAGTTCGCTGCT	
Not-16.6kb-3'RA-Rev	ATAGTTTAGCGGCCGCGAAAATCCTCACTGCCCTGTG	~600bp right arm
generation of mir-279-1x and mir-996-1x constructs		
Bbv-mir279-LA-rpsLneo-Fwd	GAATTGGGACTGGAGCTGGAATTCCTCAGCGCCCTGGTGATGATGGCGGGATCG	
mir279-LA-Fwd2	AATGGAGAACGCAAAAATCCCATTTATAATGGAATTGGGACTGGAGCTGGAATT	~50bp left arm for mir-279
Bbv-mir279-LA-rpsLneo-Rev	GTCAAGAAAACACGTCGCTTGTGATGTTGCTGAGGTCAGAAGAAGCTCGTCAAGAAGGCG	
mir279-RA-Rev2	CTTTTCGAATGAAGTACACGCGAAGTTTGTCAAGAAAACACGTCGTTGATGATT	~50bp right arm for mir-279
Bbv-mir996-LA-rpsLneo-Fwd	GGATGTGGGGGAAAGGATGCTCTTTCCTCAGCGCCCTGGTGATGATGGCGGGATCG	
mir996-LA-Fwd2	CATCCGGGCGAGAAGGAGCCCAATAGTGGGGATGTGGGGAAGGATGCTCTTT	~50bp left arm for mir-996
Bbv-mir996-RA-rpsLneo-Rev	AAAAGCTCCGCTCTCTCGTTGTGGCTCAGAGTCAGAAGAAGCTCGTCAAGAAGGCG	
mir996-RA-Rev2	AAAACGACTCCCTCCGATCCCGCGAGATGAAAAGCTCCGCTCTCTCGTTGTG	~50bp right arm for mir-996
generation of mir-279-2x construct		
Asc-13.5kb-5'LA-Fwd	TTGGCGCGCCGCCATTTTCGGTCGGATTACG	
BamH-13.5kb-5'LA-Rev	GGGCACAAAACAGAGAGCAGAGGGATCCCATCCTGCCTTCTCTGTAGTTCAG	~600bp left arm for mir-996 13.5kb upstream fragment
BamH-13.5kb-3'RA-Fwd	CTGGAACACAGAGAAGGCAGGATGGGATCCCTCCTGCTCTGTTTTGTGCC	
Not-13.5kb-3'RA-Rev	ATAGTTTAGCGCGCGCAAGAGCATCCTTCCACATCC	~600bp right arm for mir-996 13.5kb upstream fragment
Asc-3.0kb-5'LA-Fwd	TTGGCGCGCCACAACGAGAGCGGAGCTTTTC	
BamH-3.0kb-5'LA-Rev	AGCAGCGAACTATGTTAAGATGGAAGGGATCCACAACGACAACAACCCCTCGC	~600bp left arm for mir-996 3.0kb downstream fragment
BamH-3.0kb-3'RA-Fwd	GCGAGGGTTGTTGTTGTCGTTGTGGATCCCTTCCATCTTAACATAGTTCGCTGCT	
Not-3.0kb-3'RA-Rev	ATAGTTTAGCGCGCGCGAAAATCCTCACTGCCCTGTG	~600bp right arm for mir-996 3.0kb downstream fragment
Asc-Not-mir279-Fwd	TTGGCGCGCTAGCGGCCGCGAATTCATACTACTGTTTTAGTGGGTG	
Asc-mir279-Rev	TTGGCGCGCCGAACTACCGTTTATAGAGTGGATCT	cloning of mir-279 hairpin
generation of mir-996-2x construct		
Asc-11.8kb-5'LA-Fwd	TTGGCGCGCCGCCATTTTCGGTCGGATTACG	
BamH-11.8kb-5'LA-Rev	GCCCTCTGTTGTTGTGTTCTTCTTCCGGATCCCATCCTGCCTTCTCTGTAGTTCAG	~600bp left arm for mir-279 11.8kb upstream fragment
BamH-11.8kb-3'RA-Fwd	CTGGAACACAGAGAAGGCAGGATGGGATCCGAAGAAGACAACAACAAGAGGGC	
Not-11.8kb-3'RA-Rev	ATAGTTTAGCGCGCCCAATCCAGCTCCAGTCCCAATTC	~600bp right arm for mir-279 11.8kb upstream fragment
Asc-4.7kb-5'LA-Fwd	TTGGCGCGCGTTCAATCATCAAGCACGTTTTC	
BamH-4.7kb-5'LA-Rev	AGCAGCGAACTATGTTAAGATGGAAGGGATCCGGAACAAAAGGGACTGACTCAG	~600bp left arm for mir-279 4.7kb downstream fragment
BamH-4.7kb-3'RA-Fwd	CTGAGTCAGTCCCTTTTGTTCGGGATCCCTTCCATCTTAACATAGTTCGCTGCT	
Not-4.7kb-3'RA-Rev	ATAGTTTAGCGCGCGGAAAATCCTCACTGCCCTGTG	~600bp right arm for mir-279 4.7kb downstream fragment
Asc-Not-mir996-Fwd	TTGGCGCGCTAGCGGCCGCTCTGACTCTATTTTGTGCGCGAACAT	
Asc-mir996-Rev	TTGGCGCGCCTGACCAACTTAATAGACGAGCATGA	cloning of mir-996 hairpin
NOTE: Primers "Asc-16.6kb-5'LA-Fwd", "Asc-13.5kb-5'LA-Fwd" and "Asc-11.8kb-5'LA-Fwd" are the same. Primers "Not-16.6kb-3'RA-Rev", "Not-3.0kb-3'RA-Rev" and "Not-4.7kb-3'RA-Rev" are the same. Therefore, all large rescue transgene have roughly the same size of 16.6kb and the same 5' and 3'ends.		
Primers for luciferase sensor constructs		
Xho-boss-Psi-Fwd	CCGCTCGAGATCCACAACGTCCTCCACT	
Not-boss-siR1	ATAGTTTAGCGGCCGCTCTTGGTTCGTCAGTGATT	
Xho-esg-Psi-Fwd	CCGCTCGAGGAACTCAACTACGCCGGCTAT	
Not-esg-siR1	ATAGTTTAGCGGCCGCGTATTTCTTCTTCTTCGCTTGATG	
Xho-gcm-Psi-Fwd	CCGCTCGAGGCTAGGGGATCGGGATAAGAT	
Not-gcm-siR1	ATAGTTTAGCGGCCGCGTACTCACAAATGCCATAGTTCGG	
Xho-nerfin-Psi-Fwd	CCGCTCGAGCATGGCCCACTGAAATCGAG	
Not-nerfin-siR1	ATAGTTTAGCGGCCGCGAGTTTTCGCTTTTATTCAAGAGCTT	
Xho-neur-Psi-Fwd	CCGCTCGAGCTACACCACGTAGAAAGGTC	
Not-neur-siR1	ATAGTTTAGCGGCCGCTCCGCTTTGCTTGTCTTCA	
Xho-rho-Psi-Fwd	CCGCTCGAGGAGATCGAGAGACAGAGAT	
Not-rho-siR1	ATAGTTTAGCGGCCGCGTGAGGGGATTACGATGCTC	
Xho-ru-Psi-Fwd	CCGCTCGAGGCAGCATCTGATGAATGACC	
Not-ru-siR1	ATAGTTTAGCGGCCGCTAAGCCTAAGTAGGCAACTC	
Xho-STAT-Psi-Fwd	CCGCTCGAGGTGAAACGCCAAAACACAAGAAC	
Not-STAT-siR1	ATAGTTTAGCGGCCGCGGGGTGTACTTAAGTCTTATAAAATTC	
Xho-upd-Psi-Fwd	CCGCTCGAGCGTGAATAGCATACACAACATCC	
Not-upd-siR1	ATAGTTTAGCGGCCGCGTTCGCTTTATCCGCTGCTG	
Primers for qPCR assays		
Nerfin1 fw	AAGCGTAAATGAGCCGGGA	
Nerfin1 rev	CATCGAACTTCAGCTTGCGG	
Escargot fw	ATCACCATGCGCTATCTCG	
Escargot rev	CGGCTGGTCTTGTCTCTCT	
Rpl32 fw	CCGCTTCAAGGGACAGTATC	
Rpl32 rev	ACGTTGTGCCACGAGAACTT	