

## Supplement Information

### 1. Theophylline-inducible ribozyme switch for RNAi regulation plasmids targeting EGFP

#### pmiREGFP

**Template:** pSilencer-2.1-U6 vector

#### Primer1:

5'-GATCCGCCGGGAGATAGTGATGAAGTATTCAAGAGATACTTCATCACTATCTCCCGGTTTTTACGCGTG

#### Primer2:

5'-AATTCACGCGTAAAAAACCGGGAGATAGTGATGAAGTATCTTTGAATACTTCATCACTATCTCCCGGCG-3

Two primers were annealed to make double-stranded DNA fragment, and then cloned into template.

#### pTheo - HDV -miREGFP

5'-CGGGATCCTGGCTAGCGCGCAGGGGCATAAGCTGGAGTATAATTC AAGAGTTG TACTCCAGCTTGT  
GCCCAACAACAACAACATGGCCGGCATGGTCCAGCCTCCTCGCTGGCGCCGGCTGGGCAACCACAT  
ACCAGCCGAAAGGCCCTTGGCAGGTGGCGAATGGGACGCACAAATCTCTCTAGCTTCCAGAGAGAA  
GCGAGAGAAAAGTGGCTCTC*GTTGTTGTTTGT*ACTAGTGCATTTTTTAAGCTTGGG

**Green highlight:** sense strand of pre-miRNA(targeting EGFP)

**Red highlight:** antisense strand of pre-miRNA (targeting EGFP)

**Purple:** HDV ribozyme

**Double-underline:** theophylline aptamer

**Black italic:** block area

**Underlined:** restriction site for BamHI and Hind III

**Template:** pHDV-Theo-miREGFP

**Primer1:** 5'-CGGGATCCTGGCTAGCGCGCAG

**Primer2:** 5'-CCCAAGCTTAAAAAATGCACTAG

**pTheo-\*HDV-miREGFP (point mutation for inactive HDV ribozyme)**

**Template:** pHDV-Theo-miREGFP

**Primer1:** 5'-AGGTGGG**T**GAATGGGACGCACA

**Primer2:** 5'-GCCAAGGGCCTTTCGGCTGGTA

Same as template sequence except for a point mutation in the HDV ribozyme sequence C→**T** (yellow highlight).

**pwtHDV -miREGFP**

**Template:** pHDV-Theo-miREGFP

**Primer1:** 5'-CGTCCCCTCGGTAATGGCGAAT

**Primer2:** 5'-GTCCCCTCGGAATGTTGCCAG

The theophylline aptamer-connector sequences (double-underline) of template were replaced with the "5'-CATTCCGAGGGGACCGTCCCCTCGGTAATG".

## 2. Theophylline-inducible RNAi regulation plasmids targeting Bcl-2

Plasmids of pmiRBcl-2, pTheo-\*HDV-miRBcl-2, pTheo-HDV-miRBcl-2: the EGFP RNAi targeting sequences were replaced with the Bcl-2 RNAi targeting sequences .

5'- **AAGTACATCCATTATAAGCTGA**TCTCTTGAA**TCAGCTTATAATGGATGTA**CTT

**pTheo-HDV-miRBcl-2**

**Template:** pHDV-Theo-miREGFP

**Primer1:** 5'-TTGAATCAGCTTATAATGGATGTA**CTTAACAAACAACAACATGGCCG**

**Primer2:** 5'-GAGATCAGCTTATAATGGATGTA**CTTCTGCGCGCTAGCCAGGATCC**

**pTheo-\*HDV-miRBcl-2**

**Template:** pHDV-Theo-miREGFP

**Primer1:** 5'-AGGTGGGTGAATGGGACGCACA

**Primer2:** 5'-GCCAAGGGCCTTTCGGCTGGTA