**FRT-STOP-FRT-6XOLLAS-vAChT**

**TCGACGGATCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCATTGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAAGCTCGCACATTCAGCAGCGTTTTTCAGCGCGTTTTCGATCAGCGTTTCAATGTTGGTATCAACACCAGGTTTAACTTTGAACTTATCGGCACTGACGGTTACTGATTTTGAACTTTTGCTTTGCCACGGAACGGTCTGCGTTGTCGGGAAGATGCGTGATCTGATCCTTCAACTCAGCAAAAGTTCGCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAATTTCACAAGGAAACAGCTATGACATGATTACGAATTCGAGCTCGGTACCCGGCAGGGGTCATATTTATACGCAGCACACGTCGTATTTTCATGTTTACCAAAATGGGGTGGCTGGTCGTCGAGCGCTAGAAGGTAGATAAATGTTGAAATTAGATCGGCATTGATAGCCGGCATAGCAGAGATGTTAGCTATAGGAAGTTTTTTAACACCATGAAGCCCTAATGAACTTAGAGTGGTGGCAGTTGCTGAAGTATAAGTCCAAACTGTATAATTTTTTACACAAAAACAATGAATCACTAATCACATGTATCACATGTTTACTAGATAATTCTTTCTAACGTTTAAAAAACAAAATTTTGATACTTCAGTATATGCTTGTCCACCGATACTCTTTCGAAAATTATATTTCTTATTTGAGCACAATGCTTGGGTCGACTTAAGCTCCCTTTTGTTCGCATTCAAGTATTTTCGGATGTCGTGCAAGTTGAGTGGGTCTTTTTTCTGTGAAGTAAAAGCAATAATTATAATTACTGCGTAGATGAGTGCAACCGCGTGGCTCTAAGAACACTCTACGTTTACATGCCCACAAAATCCAATTAAAATAATTGCTACACCCTTATATAATCACCCTGGACCCACAAATGTGTTCAATGAATTAATTGTAGAATTTACTTAACACGTACTTTTCGGTATTCGTTTTATGATTGAAATGTGTGTCCCTCGAAAAGAAGAACCTGAAACTGAAAGATATCCCTAATCCTATGTAATCGAAACAATGCGAATGCCACGAACTAATCCTAATAAAATACAATGTTCACCAGCAGGCAGCCTTTTGCAACACAGAAACAACATTTCAATCATAAAATAGACCCAACTAACCAGCTAATCCTAGTTAAGAGTAAGAAAGAGAAGCAGAGAGGAGCACATGTGCGAGAGAGAGAGAGTGCTGCTAAAAAATTAAGAAAATAAATGTAGCACGGCAATCAAGCTGCAAAATTAAAGAAAAGACTAACGAAATCTTGTTTCTGTGTCGTTAAAGGTTGTTCACTGGCATGCCAACAACTCGTACACCTCCAACTACAACAAGCACACCAAAACATGTAAAACCACACAGCAACAACATCAAGAGCAGGAGCAAACAATACAGTTAACCACAAGCAACGATAAACCACCTCAGAGCGGGCAATTAGCGGAGAAACGGAAGCGGCCATATTCGTAGCGAGAGCTAAGCAACGGCTGTAAGAATGGCAAGCCCGCCGATCGGCGCATAAAAGCTTTAAGGCAACAGAGAAGAGTACAAACAAGGAAAAGAAGAGAGGCAGAGAGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCTAACGTAAGCTAGCTAGACCGGTGTCGACTAAAGCCAAATAGAAAATTATTCAGTTCCTGGCTTAAGTTTTTAAAAGTGATATTATTTATTTGGTTGTAACCAACCAAAAGAATGTAAATAACTAATACATAATTATGTTAGTTTTAAGTTAGCAACAAATTGATTTTAGCTATATTAGCTACTTGGTTAATAAATAGAATATATTTATTTAAAGATAATTGCGTTTTTATTGTCAGGGAGTGAGTTTGCTTAAAAACTCGTTTAGGTTTGTCCTCCCGAAATTATTTATTTAAATGCGATGGAGAGTTGGCGCCGAATCGAAAACTTTACGCGCTTAAAAGCACGAGTTGGCATCCCTAACGCGTAGGATCTTTGTGAAGGAACCTTACTTCTGTGGTGTGACATAATTGGACAAACTACCTACAGAGATTTAAAGCTCTAAGGTAAATATAAAATTTTTAAGTGTATAATGTGTTAAACTACTGATTCTAATTGTTTGTGTATTTTAGATTCCAACCTATGGAACTGATGAATGGGAGCAGTGGTGGAATGCCTTTAATGAGGAAAACCTGTTTTGCTCAGAAGAAATGCCATCTAGTGATGATGAGGCTACTGCTGACTCTCAACATTCTACTCCTCCAAAAAAGAAGAGAAAGGTAGAAGACCCCAAGGACTTTCCTTCAGAATTGCTAAGTTTTTTGAGTCATGCTGTGTTTAGTAATAGAACTCTTGCTTGCTTTGCTATTTACACCACAAAGGAAAAAGCTGCACTGCTATACAAGAAAATTATGGAAAAATATTTGATGTATAGTGCCTTGACTAGAGATCATAATCAGCCATACCACATTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCCACACCTCCCCCTGAACCTGAAACATAAAATGAATGCAATTGTTGTTGTTAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGGATCACTAGTGATCTGGCCGGGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGAGAGAGAGAGAGAGAGGGAGAGGAAGTCCCAAAGAAACTGGATCAGAACTTTGTACACCTCAGCAATTGAAATTAATTAATTGCAACCAAAATGagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCGCCTCATTCCAAATACCTGTTATCAACCTGGAGGTGCGCGAGGTCAAGGACATCGTGTGGGAGAAGATCCAGGAGCCGGTGAACCAGCGACGCCTCATCCTCGTGATTGTATCGATAGCCCTGCTGCTGGACAACATGCTGTATATGGTGATAGTACCGATTATACCCGACTATTTAAGAGAGATTGGCAGCTTCGATGACGGGCCGACGCCTCCACCGTTGAGGGATAATATCACGGGAAAGATCATACCCGTGCATCATGATCATCACGGGCAGGACTCGGCCACGGGCATCCTATTCGCCTCGAAGGCCATCGTCCAGCTGATGGTGAATCCGTTTTCGGGCGGCCTCATCGACAAGATCGGCTACGATTTGCCCATGATGATCGGCCTGACCATCATGTTCTTCTCGACGGCAGTCTTTGCTTGTGGCAGCAGCTACAGTGTCCTGTTCTTCGCCCGATCCCTGCAGGGAGCCGGTTCCGCCTTTGCGGACACCGCCGGTTTGGCCATGATAGCCGATCGGTTCACCGAGGAGAACGAACGTTCGCAGGCCCTTGGCATTGCGTTGGCCTTCATCAGTTTCGGATGCCTGGTGGCGCCTCCGTTTGGCGGAGCGCTCTACCAGTTCGCCGGAAAGGAAGTGCCCTTTCTGATCCTGGCACTGGTGTGCCTACTGGACGGGCTGATGCTGCTGCTGGTGATGAAACCGGTCAAGGAGGCGATGAAGCAAAGCAAGGATGTGCAGGACCAAGTAATACCCATCTGGCGCCTGCTGATGGATCCCTATATTGCAGTCTGTGCCGGGGCACTGACCATGTCCAATGTGGCGCTGGCCTTTCTGGAGCCAACCATTTCGCTGTGGATGGAGGATAACATGACCACTGACAACTGGAAGATCGGCATGGTCTGGCTGCCCGCCTTCTTCCCACACGTGCTGGGCGTGGTCATTACGGTGAAGATGGCCCGCAAGTATCCGCAGCACCAGTGGCTAATGGCTGCCGGTGGATTGGCCCTGGAGGGCTTCTCCTGCTTCATCATACCATTCTGCAGCGGCTACAAGATGCTCATGCTGCCCATCTGTGTGATCTGCTTCGGAATTGCCCTAATAGACACGGCTCTACTACCCACACTCGGTTATCTGGTGGACGTGCGATATGTGTCGGTGTACGGTAGTATCTATGCCATAGCAGATATATCCTACTCGATCGCCTATGCCGTAGGGCCCATTATCGCCGGCGGAGTGGTGGAGGCCATTGGGTTTACGGCTCTCAACTTTTTGATAGCCTTCTCGAATCTGGCCTATGTGCCCGTGCTGCGAAAGCTGCGCAACATCTACGACTTCAAGCCGTTCGAGAATGAGGCCAACATCCTGATGCAGGACCCGCCCAACAAAGAGTACCAGACCTATGTGATGCACGACCAGAAACCCGTCGAGGGTGGCGTCAAGAATCATCTGGAGTACGGCCAGCAGTATCAGCAGGAGCAGGAGACGAATCTGGATGACCAGCAGTACGAGTACCAGCAGCAGCAGCAGGGATACCAGCAAGGATATCAGCAGGATCAGGGCTACCAGCCGGGCTATCAGGAGCAGGGCGGCAGCTACGCCCCGCAAGGTCAGCCCCGTGTGGCCAATCCCTTCCAGCAGCAGCAGCAGCAGCAACAACAACAACAGCAGCAGGTCCAGAGCAGAGGTCCTGCCGCCCCAGCGAATCCCTTTAGGCAAGGATTTTAAACTGTTGCCCCGAACAGATACTCCTAGAAATCGTGTTCTTTTGCACACCTCCGTGTGCAATATTCTGTTCTCTGTTGAATCCACTCTAATCTAGACACAAGACACATACACATATATTATTACTATAGACATATAGGCAAGTGGTACGTACACTATAACGAGCATTACATGCAGATAGTTAAAATAGCAGCTAGTTAATGCCTTGCACCGCACCAAGTTTTGTATCATACACGAATGTTGAAGCAACCGAGAACAGTGAGTAAGGTAGGACTTGAGTTTACTTGGATGTGGAAATGGACCTAAAGGACCCAAAAAGGATGGAAAGCTTATTTTTTTTAAATCCAATTCAAAGTAACAAAATTTACGAAGGCAAGCGAAAGTGTGAACTGAATTTTTTTTTTGTAATTAACAAAGCTGATACCAAAATAGAAAGTTAATACCATATACCAATAACATTAAGCTATTTGTAAAGATGACATTATATGCGAACATTTCACTATTTAGAAATGCCAAAAAGAATCAATGTTTCAGTAATGATAACAACTCTATATTCCTATCCATGTCCAAGTAAGCCGCCAAACTACCAGGCCTAAGATATACCCATCACTAATATAACGCATATATGCTATATAGAGCGGTCCGATCGGATCGCCTATGCCCTATACTCAGTACTCATGCAGCCGTTTTCGTGTCTATCAGTCAGTGAAGCTAGAGAAACCAAAGCCTAGTCATAGATAGTTGATAAGAGGATTCGGACTCGGTATCGAACTCCCGCCCCATCAAGTATACACACAAGTATCAGATATTATATACACGCATACATATATATAATATATATATCTATATACAAGCTAGCTGTGTAAGCAGCTCAGCTGACCAGAGGACCACTTTTGCCCAAGTGCCGCCGCTTAAAAAGCAATGGCATCCATATCGCAGACATATCACAAGTTGCACAAATTGAAACCCTCCCACGCCCACTCAAAAAAGAGGAACTCCTTCGGTTGTCATTGTGGCGGACTTGGGACGAGAGTGGATTCCCGGCCAGAGGGGCTATATGATTTACGGTTTGAAAAGCATTATGATTTGAAAGTTTCTTAAACATAAGACACAACCAAGGTAACGATACATATCAGAGTCTCGATGGCTCGCCTGTTAAAATTACCAAAAGTGATATTACTTATTGCTACTAGTCTATATACATACATACATATATATCGTATCATATCGATAGCATACACAACTAGTGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGCGATTTATTCAACAAAGCCGCCGTCCCGTCAAGTCAGCGTAATGCTCTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAACTGCAATTTATTCATATCAGGATTATCAATACCATATTTTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCATAGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACATCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTATCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATGCATTTCTTTCCAGACTTGTTCAACAGGCCAGCCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGAGACGAAATACGCGATCGCTGTTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAATCAGGATATTCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTCGGAAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAACAACTCTGGCGCATCGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAATCAGCATCCATGTTGGAATTTAATCGCGGCTTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATGTAAGCAGACAGTTTTATTGTTCATGATGATATATTTTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGAATAAATCGAACTTTTGCTGAGTTGAAGGATCAGATCACGCATCTTCCCGACAACGCAGACCGTTCCGTGGCAAAGCAAAAGTTCAAAATCACCAACTGGTCCACCTACAACAAAGCTCTCATCAACCGTGGCTCCCTCACTTTCTGGCTGGATGATGGGGCGATTCAGGCCTGGTATGAGTCAGCAACACCTTCTTCACGAGGCAGACCTC**

**Key: Guide RNA, FRT, STOP cassette, ATG, OLLAS, Linker, pHSG298.**

**B2RT-STOP-B2RT-6XOLLAS-vAChT**

**TCGACGGATCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCATTGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAAGCTCGCACATTCAGCAGCGTTTTTCAGCGCGTTTTCGATCAGCGTTTCAATGTTGGTATCAACACCAGGTTTAACTTTGAACTTATCGGCACTGACGGTTACTGATTTTGAACTTTTGCTTTGCCACGGAACGGTCTGCGTTGTCGGGAAGATGCGTGATCTGATCCTTCAACTCAGCAAAAGTTCGCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAATTTCACAAGGAAACAGCTATGACATGATTACGAATTCGAGCTCGGTACCCGGCAGGGGTCATATTTATACGCAGCACACGTCGTATTTTCATGTTTACCAAAATGGGGTGGCTGGTCGTCGAGCGCTAGAAGGTAGATAAATGTTGAAATTAGATCGGCATTGATAGCCGGCATAGCAGAGATGTTAGCTATAGGAAGTTTTTTAACACCATGAAGCCCTAATGAACTTAGAGTGGTGGCAGTTGCTGAAGTATAAGTCCAAACTGTATAATTTTTTACACAAAAACAATGAATCACTAATCACATGTATCACATGTTTACTAGATAATTCTTTCTAACGTTTAAAAAACAAAATTTTGATACTTCAGTATATGCTTGTCCACCGATACTCTTTCGAAAATTATATTTCTTATTTGAGCACAATGCTTGGGTCGACTTAAGCTCCCTTTTGTTCGCATTCAAGTATTTTCGGATGTCGTGCAAGTTGAGTGGGTCTTTTTTCTGTGAAGTAAAAGCAATAATTATAATTACTGCGTAGATGAGTGCAACCGCGTGGCTCTAAGAACACTCTACGTTTACATGCCCACAAAATCCAATTAAAATAATTGCTACACCCTTATATAATCACCCTGGACCCACAAATGTGTTCAATGAATTAATTGTAGAATTTACTTAACACGTACTTTTCGGTATTCGTTTTATGATTGAAATGTGTGTCCCTCGAAAAGAAGAACCTGAAACTGAAAGATATCCCTAATCCTATGTAATCGAAACAATGCGAATGCCACGAACTAATCCTAATAAAATACAATGTTCACCAGCAGGCAGCCTTTTGCAACACAGAAACAACATTTCAATCATAAAATAGACCCAACTAACCAGCTAATCCTAGTTAAGAGTAAGAAAGAGAAGCAGAGAGGAGCACATGTGCGAGAGAGAGAGAGTGCTGCTAAAAAATTAAGAAAATAAATGTAGCACGGCAATCAAGCTGCAAAATTAAAGAAAAGACTAACGAAATCTTGTTTCTGTGTCGTTAAAGGTTGTTCACTGGCATGCCAACAACTCGTACACCTCCAACTACAACAAGCACACCAAAACATGTAAAACCACACAGCAACAACATCAAGAGCAGGAGCAAACAATACAGTTAACCACAAGCAACGATAAACCACCTCAGAGCGGGCAATTAGCGGAGAAACGGAAGCGGCCATATTCGTAGCGAGAGCTAAGCAACGGCTGTAAGAATGGCAAGCCCGCCGATCGGCGCATAAAAGCTTTAAGGCAACAGAGAAGAGTACAAACAAGGAAAAGAAGAGAGGCAGAGAgagtttcattaaggaataactaattccctaatgaaactcTAACGTAAGCTAGCTAGACCGGTGTCGACTAAAGCCAAATAGAAAATTATTCAGTTCCTGGCTTAAGTTTTTAAAAGTGATATTATTTATTTGGTTGTAACCAACCAAAAGAATGTAAATAACTAATACATAATTATGTTAGTTTTAAGTTAGCAACAAATTGATTTTAGCTATATTAGCTACTTGGTTAATAAATAGAATATATTTATTTAAAGATAATTGCGTTTTTATTGTCAGGGAGTGAGTTTGCTTAAAAACTCGTTTAGGTTTGTCCTCCCGAAATTATTTATTTAAATGCGATGGAGAGTTGGCGCCGAATCGAAAACTTTACGCGCTTAAAAGCACGAGTTGGCATCCCTAACGCGTAGGATCTTTGTGAAGGAACCTTACTTCTGTGGTGTGACATAATTGGACAAACTACCTACAGAGATTTAAAGCTCTAAGGTAAATATAAAATTTTTAAGTGTATAATGTGTTAAACTACTGATTCTAATTGTTTGTGTATTTTAGATTCCAACCTATGGAACTGATGAATGGGAGCAGTGGTGGAATGCCTTTAATGAGGAAAACCTGTTTTGCTCAGAAGAAATGCCATCTAGTGATGATGAGGCTACTGCTGACTCTCAACATTCTACTCCTCCAAAAAAGAAGAGAAAGGTAGAAGACCCCAAGGACTTTCCTTCAGAATTGCTAAGTTTTTTGAGTCATGCTGTGTTTAGTAATAGAACTCTTGCTTGCTTTGCTATTTACACCACAAAGGAAAAAGCTGCACTGCTATACAAGAAAATTATGGAAAAATATTTGATGTATAGTGCCTTGACTAGAGATCATAATCAGCCATACCACATTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCCACACCTCCCCCTGAACCTGAAACATAAAATGAATGCAATTGTTGTTGTTAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGGATCACTAGTGATCTGGCCGGgagtttcattaaggaataactaattccctaatgaaactcGAGAGAGAGAGAGAGAGGGAGAGGAAGTCCCAAAGAAACTGGATCAGAACTTTGTACACCTCAGCAATTGAAATTAATTAATTGCAACCAAAATGagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCagcggcttcgccaacgagttgggcccccgcttgatgggcaagGGCGGATCTGGCGCCTCATTCCAAATACCTGTTATCAACCTGGAGGTGCGCGAGGTCAAGGACATCGTGTGGGAGAAGATCCAGGAGCCGGTGAACCAGCGACGCCTCATCCTCGTGATTGTATCGATAGCCCTGCTGCTGGACAACATGCTGTATATGGTGATAGTACCGATTATACCCGACTATTTAAGAGAGATTGGCAGCTTCGATGACGGGCCGACGCCTCCACCGTTGAGGGATAATATCACGGGAAAGATCATACCCGTGCATCATGATCATCACGGGCAGGACTCGGCCACGGGCATCCTATTCGCCTCGAAGGCCATCGTCCAGCTGATGGTGAATCCGTTTTCGGGCGGCCTCATCGACAAGATCGGCTACGATTTGCCCATGATGATCGGCCTGACCATCATGTTCTTCTCGACGGCAGTCTTTGCTTGTGGCAGCAGCTACAGTGTCCTGTTCTTCGCCCGATCCCTGCAGGGAGCCGGTTCCGCCTTTGCGGACACCGCCGGTTTGGCCATGATAGCCGATCGGTTCACCGAGGAGAACGAACGTTCGCAGGCCCTTGGCATTGCGTTGGCCTTCATCAGTTTCGGATGCCTGGTGGCGCCTCCGTTTGGCGGAGCGCTCTACCAGTTCGCCGGAAAGGAAGTGCCCTTTCTGATCCTGGCACTGGTGTGCCTACTGGACGGGCTGATGCTGCTGCTGGTGATGAAACCGGTCAAGGAGGCGATGAAGCAAAGCAAGGATGTGCAGGACCAAGTAATACCCATCTGGCGCCTGCTGATGGATCCCTATATTGCAGTCTGTGCCGGGGCACTGACCATGTCCAATGTGGCGCTGGCCTTTCTGGAGCCAACCATTTCGCTGTGGATGGAGGATAACATGACCACTGACAACTGGAAGATCGGCATGGTCTGGCTGCCCGCCTTCTTCCCACACGTGCTGGGCGTGGTCATTACGGTGAAGATGGCCCGCAAGTATCCGCAGCACCAGTGGCTAATGGCTGCCGGTGGATTGGCCCTGGAGGGCTTCTCCTGCTTCATCATACCATTCTGCAGCGGCTACAAGATGCTCATGCTGCCCATCTGTGTGATCTGCTTCGGAATTGCCCTAATAGACACGGCTCTACTACCCACACTCGGTTATCTGGTGGACGTGCGATATGTGTCGGTGTACGGTAGTATCTATGCCATAGCAGATATATCCTACTCGATCGCCTATGCCGTAGGGCCCATTATCGCCGGCGGAGTGGTGGAGGCCATTGGGTTTACGGCTCTCAACTTTTTGATAGCCTTCTCGAATCTGGCCTATGTGCCCGTGCTGCGAAAGCTGCGCAACATCTACGACTTCAAGCCGTTCGAGAATGAGGCCAACATCCTGATGCAGGACCCGCCCAACAAAGAGTACCAGACCTATGTGATGCACGACCAGAAACCCGTCGAGGGTGGCGTCAAGAATCATCTGGAGTACGGCCAGCAGTATCAGCAGGAGCAGGAGACGAATCTGGATGACCAGCAGTACGAGTACCAGCAGCAGCAGCAGGGATACCAGCAAGGATATCAGCAGGATCAGGGCTACCAGCCGGGCTATCAGGAGCAGGGCGGCAGCTACGCCCCGCAAGGTCAGCCCCGTGTGGCCAATCCCTTCCAGCAGCAGCAGCAGCAGCAACAACAACAACAGCAGCAGGTCCAGAGCAGAGGTCCTGCCGCCCCAGCGAATCCCTTTAGGCAAGGATTTTAAACTGTTGCCCCGAACAGATACTCCTAGAAATCGTGTTCTTTTGCACACCTCCGTGTGCAATATTCTGTTCTCTGTTGAATCCACTCTAATCTAGACACAAGACACATACACATATATTATTACTATAGACATATAGGCAAGTGGTACGTACACTATAACGAGCATTACATGCAGATAGTTAAAATAGCAGCTAGTTAATGCCTTGCACCGCACCAAGTTTTGTATCATACACGAATGTTGAAGCAACCGAGAACAGTGAGTAAGGTAGGACTTGAGTTTACTTGGATGTGGAAATGGACCTAAAGGACCCAAAAAGGATGGAAAGCTTATTTTTTTTAAATCCAATTCAAAGTAACAAAATTTACGAAGGCAAGCGAAAGTGTGAACTGAATTTTTTTTTTGTAATTAACAAAGCTGATACCAAAATAGAAAGTTAATACCATATACCAATAACATTAAGCTATTTGTAAAGATGACATTATATGCGAACATTTCACTATTTAGAAATGCCAAAAAGAATCAATGTTTCAGTAATGATAACAACTCTATATTCCTATCCATGTCCAAGTAAGCCGCCAAACTACCAGGCCTAAGATATACCCATCACTAATATAACGCATATATGCTATATAGAGCGGTCCGATCGGATCGCCTATGCCCTATACTCAGTACTCATGCAGCCGTTTTCGTGTCTATCAGTCAGTGAAGCTAGAGAAACCAAAGCCTAGTCATAGATAGTTGATAAGAGGATTCGGACTCGGTATCGAACTCCCGCCCCATCAAGTATACACACAAGTATCAGATATTATATACACGCATACATATATATAATATATATATCTATATACAAGCTAGCTGTGTAAGCAGCTCAGCTGACCAGAGGACCACTTTTGCCCAAGTGCCGCCGCTTAAAAAGCAATGGCATCCATATCGCAGACATATCACAAGTTGCACAAATTGAAACCCTCCCACGCCCACTCAAAAAAGAGGAACTCCTTCGGTTGTCATTGTGGCGGACTTGGGACGAGAGTGGATTCCCGGCCAGAGGGGCTATATGATTTACGGTTTGAAAAGCATTATGATTTGAAAGTTTCTTAAACATAAGACACAACCAAGGTAACGATACATATCAGAGTCTCGATGGCTCGCCTGTTAAAATTACCAAAAGTGATATTACTTATTGCTACTAGTCTATATACATACATACATATATATCGTATCATATCGATAGCATACACAACTAGTGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGCGATTTATTCAACAAAGCCGCCGTCCCGTCAAGTCAGCGTAATGCTCTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAACTGCAATTTATTCATATCAGGATTATCAATACCATATTTTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCATAGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACATCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTATCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATGCATTTCTTTCCAGACTTGTTCAACAGGCCAGCCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGAGACGAAATACGCGATCGCTGTTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAATCAGGATATTCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTCGGAAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAACAACTCTGGCGCATCGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAATCAGCATCCATGTTGGAATTTAATCGCGGCTTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATGTAAGCAGACAGTTTTATTGTTCATGATGATATATTTTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGAATAAATCGAACTTTTGCTGAGTTGAAGGATCAGATCACGCATCTTCCCGACAACGCAGACCGTTCCGTGGCAAAGCAAAAGTTCAAAATCACCAACTGGTCCACCTACAACAAAGCTCTCATCAACCGTGGCTCCCTCACTTTCTGGCTGGATGATGGGGCGATTCAGGCCTGGTATGAGTCAGCAACACCTTCTTCACGAGGCAGACCTC**

**Key: Guide RNA, FRT, STOP cassette, ATG, OLLAS, Linker, pHSG298.**

**FRT-STOP-FRT-7XMYC-vAChT**

**TCGACGGATCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCATTGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAAGCTCGCACATTCAGCAGCGTTTTTCAGCGCGTTTTCGATCAGCGTTTCAATGTTGGTATCAACACCAGGTTTAACTTTGAACTTATCGGCACTGACGGTTACTGATTTTGAACTTTTGCTTTGCCACGGAACGGTCTGCGTTGTCGGGAAGATGCGTGATCTGATCCTTCAACTCAGCAAAAGTTCGCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAATTTCACAAGGAAACAGCTATGACATGATTACGAATTCGAGCTCGGTACCCGGCAGGGGTCATATTTATACGCAGCACACGTCGTATTTTCATGTTTACCAAAATGGGGTGGCTGGTCGTCGAGCGCTAGAAGGTAGATAAATGTTGAAATTAGATCGGCATTGATAGCCGGCATAGCAGAGATGTTAGCTATAGGAAGTTTTTTAACACCATGAAGCCCTAATGAACTTAGAGTGGTGGCAGTTGCTGAAGTATAAGTCCAAACTGTATAATTTTTTACACAAAAACAATGAATCACTAATCACATGTATCACATGTTTACTAGATAATTCTTTCTAACGTTTAAAAAACAAAATTTTGATACTTCAGTATATGCTTGTCCACCGATACTCTTTCGAAAATTATATTTCTTATTTGAGCACAATGCTTGGGTCGACTTAAGCTCCCTTTTGTTCGCATTCAAGTATTTTCGGATGTCGTGCAAGTTGAGTGGGTCTTTTTTCTGTGAAGTAAAAGCAATAATTATAATTACTGCGTAGATGAGTGCAACCGCGTGGCTCTAAGAACACTCTACGTTTACATGCCCACAAAATCCAATTAAAATAATTGCTACACCCTTATATAATCACCCTGGACCCACAAATGTGTTCAATGAATTAATTGTAGAATTTACTTAACACGTACTTTTCGGTATTCGTTTTATGATTGAAATGTGTGTCCCTCGAAAAGAAGAACCTGAAACTGAAAGATATCCCTAATCCTATGTAATCGAAACAATGCGAATGCCACGAACTAATCCTAATAAAATACAATGTTCACCAGCAGGCAGCCTTTTGCAACACAGAAACAACATTTCAATCATAAAATAGACCCAACTAACCAGCTAATCCTAGTTAAGAGTAAGAAAGAGAAGCAGAGAGGAGCACATGTGCGAGAGAGAGAGAGTGCTGCTAAAAAATTAAGAAAATAAATGTAGCACGGCAATCAAGCTGCAAAATTAAAGAAAAGACTAACGAAATCTTGTTTCTGTGTCGTTAAAGGTTGTTCACTGGCATGCCAACAACTCGTACACCTCCAACTACAACAAGCACACCAAAACATGTAAAACCACACAGCAACAACATCAAGAGCAGGAGCAAACAATACAGTTAACCACAAGCAACGATAAACCACCTCAGAGCGGGCAATTAGCGGAGAAACGGAAGCGGCCATATTCGTAGCGAGAGCTAAGCAACGGCTGTAAGAATGGCAAGCCCGCCGATCGGCGCATAAAAGCTTTAAGGCAACAGAGAAGAGTACAAACAAGGAAAAGAAGAGAGGCAGAGAGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCTAACGTAAGCTAGCTAGACCGGTGTCGACTAAAGCCAAATAGAAAATTATTCAGTTCCTGGCTTAAGTTTTTAAAAGTGATATTATTTATTTGGTTGTAACCAACCAAAAGAATGTAAATAACTAATACATAATTATGTTAGTTTTAAGTTAGCAACAAATTGATTTTAGCTATATTAGCTACTTGGTTAATAAATAGAATATATTTATTTAAAGATAATTGCGTTTTTATTGTCAGGGAGTGAGTTTGCTTAAAAACTCGTTTAGGTTTGTCCTCCCGAAATTATTTATTTAAATGCGATGGAGAGTTGGCGCCGAATCGAAAACTTTACGCGCTTAAAAGCACGAGTTGGCATCCCTAACGCGTAGGATCTTTGTGAAGGAACCTTACTTCTGTGGTGTGACATAATTGGACAAACTACCTACAGAGATTTAAAGCTCTAAGGTAAATATAAAATTTTTAAGTGTATAATGTGTTAAACTACTGATTCTAATTGTTTGTGTATTTTAGATTCCAACCTATGGAACTGATGAATGGGAGCAGTGGTGGAATGCCTTTAATGAGGAAAACCTGTTTTGCTCAGAAGAAATGCCATCTAGTGATGATGAGGCTACTGCTGACTCTCAACATTCTACTCCTCCAAAAAAGAAGAGAAAGGTAGAAGACCCCAAGGACTTTCCTTCAGAATTGCTAAGTTTTTTGAGTCATGCTGTGTTTAGTAATAGAACTCTTGCTTGCTTTGCTATTTACACCACAAAGGAAAAAGCTGCACTGCTATACAAGAAAATTATGGAAAAATATTTGATGTATAGTGCCTTGACTAGAGATCATAATCAGCCATACCACATTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCCACACCTCCCCCTGAACCTGAAACATAAAATGAATGCAATTGTTGTTGTTAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGGATCACTAGTGATCTGGCCGGGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGAGAGAGAGAGAGAGAGGGAGAGGAAGTCCCAAAGAAACTGGATCAGAACTTTGTACACCTCAGCAATTGAAATTAATTAATTGCAACCAAAATGGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGCCTCATTCCAAATACCTGTTATCAACCTGGAGGTGCGCGAGGTCAAGGACATCGTGTGGGAGAAGATCCAGGAGCCGGTGAACCAGCGACGCCTCATCCTCGTGATTGTATCGATAGCCCTGCTGCTGGACAACATGCTGTATATGGTGATAGTACCGATTATACCCGACTATTTAAGAGAGATTGGCAGCTTCGATGACGGGCCGACGCCTCCACCGTTGAGGGATAATATCACGGGAAAGATCATACCCGTGCATCATGATCATCACGGGCAGGACTCGGCCACGGGCATCCTATTCGCCTCGAAGGCCATCGTCCAGCTGATGGTGAATCCGTTTTCGGGCGGCCTCATCGACAAGATCGGCTACGATTTGCCCATGATGATCGGCCTGACCATCATGTTCTTCTCGACGGCAGTCTTTGCTTGTGGCAGCAGCTACAGTGTCCTGTTCTTCGCCCGATCCCTGCAGGGAGCCGGTTCCGCCTTTGCGGACACCGCCGGTTTGGCCATGATAGCCGATCGGTTCACCGAGGAGAACGAACGTTCGCAGGCCCTTGGCATTGCGTTGGCCTTCATCAGTTTCGGATGCCTGGTGGCGCCTCCGTTTGGCGGAGCGCTCTACCAGTTCGCCGGAAAGGAAGTGCCCTTTCTGATCCTGGCACTGGTGTGCCTACTGGACGGGCTGATGCTGCTGCTGGTGATGAAACCGGTCAAGGAGGCGATGAAGCAAAGCAAGGATGTGCAGGACCAAGTAATACCCATCTGGCGCCTGCTGATGGATCCCTATATTGCAGTCTGTGCCGGGGCACTGACCATGTCCAATGTGGCGCTGGCCTTTCTGGAGCCAACCATTTCGCTGTGGATGGAGGATAACATGACCACTGACAACTGGAAGATCGGCATGGTCTGGCTGCCCGCCTTCTTCCCACACGTGCTGGGCGTGGTCATTACGGTGAAGATGGCCCGCAAGTATCCGCAGCACCAGTGGCTAATGGCTGCCGGTGGATTGGCCCTGGAGGGCTTCTCCTGCTTCATCATACCATTCTGCAGCGGCTACAAGATGCTCATGCTGCCCATCTGTGTGATCTGCTTCGGAATTGCCCTAATAGACACGGCTCTACTACCCACACTCGGTTATCTGGTGGACGTGCGATATGTGTCGGTGTACGGTAGTATCTATGCCATAGCAGATATATCCTACTCGATCGCCTATGCCGTAGGGCCCATTATCGCCGGCGGAGTGGTGGAGGCCATTGGGTTTACGGCTCTCAACTTTTTGATAGCCTTCTCGAATCTGGCCTATGTGCCCGTGCTGCGAAAGCTGCGCAACATCTACGACTTCAAGCCGTTCGAGAATGAGGCCAACATCCTGATGCAGGACCCGCCCAACAAAGAGTACCAGACCTATGTGATGCACGACCAGAAACCCGTCGAGGGTGGCGTCAAGAATCATCTGGAGTACGGCCAGCAGTATCAGCAGGAGCAGGAGACGAATCTGGATGACCAGCAGTACGAGTACCAGCAGCAGCAGCAGGGATACCAGCAAGGATATCAGCAGGATCAGGGCTACCAGCCGGGCTATCAGGAGCAGGGCGGCAGCTACGCCCCGCAAGGTCAGCCCCGTGTGGCCAATCCCTTCCAGCAGCAGCAGCAGCAGCAACAACAACAACAGCAGCAGGTCCAGAGCAGAGGTCCTGCCGCCCCAGCGAATCCCTTTAGGCAAGGATTTTAAACTGTTGCCCCGAACAGATACTCCTAGAAATCGTGTTCTTTTGCACACCTCCGTGTGCAATATTCTGTTCTCTGTTGAATCCACTCTAATCTAGACACAAGACACATACACATATATTATTACTATAGACATATAGGCAAGTGGTACGTACACTATAACGAGCATTACATGCAGATAGTTAAAATAGCAGCTAGTTAATGCCTTGCACCGCACCAAGTTTTGTATCATACACGAATGTTGAAGCAACCGAGAACAGTGAGTAAGGTAGGACTTGAGTTTACTTGGATGTGGAAATGGACCTAAAGGACCCAAAAAGGATGGAAAGCTTATTTTTTTTAAATCCAATTCAAAGTAACAAAATTTACGAAGGCAAGCGAAAGTGTGAACTGAATTTTTTTTTTGTAATTAACAAAGCTGATACCAAAATAGAAAGTTAATACCATATACCAATAACATTAAGCTATTTGTAAAGATGACATTATATGCGAACATTTCACTATTTAGAAATGCCAAAAAGAATCAATGTTTCAGTAATGATAACAACTCTATATTCCTATCCATGTCCAAGTAAGCCGCCAAACTACCAGGCCTAAGATATACCCATCACTAATATAACGCATATATGCTATATAGAGCGGTCCGATCGGATCGCCTATGCCCTATACTCAGTACTCATGCAGCCGTTTTCGTGTCTATCAGTCAGTGAAGCTAGAGAAACCAAAGCCTAGTCATAGATAGTTGATAAGAGGATTCGGACTCGGTATCGAACTCCCGCCCCATCAAGTATACACACAAGTATCAGATATTATATACACGCATACATATATATAATATATATATCTATATACAAGCTAGCTGTGTAAGCAGCTCAGCTGACCAGAGGACCACTTTTGCCCAAGTGCCGCCGCTTAAAAAGCAATGGCATCCATATCGCAGACATATCACAAGTTGCACAAATTGAAACCCTCCCACGCCCACTCAAAAAAGAGGAACTCCTTCGGTTGTCATTGTGGCGGACTTGGGACGAGAGTGGATTCCCGGCCAGAGGGGCTATATGATTTACGGTTTGAAAAGCATTATGATTTGAAAGTTTCTTAAACATAAGACACAACCAAGGTAACGATACATATCAGAGTCTCGATGGCTCGCCTGTTAAAATTACCAAAAGTGATATTACTTATTGCTACTAGTCTATATACATACATACATATATATCGTATCATATCGATAGCATACACAACTAGTGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGCGATTTATTCAACAAAGCCGCCGTCCCGTCAAGTCAGCGTAATGCTCTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAACTGCAATTTATTCATATCAGGATTATCAATACCATATTTTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCATAGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACATCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTATCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATGCATTTCTTTCCAGACTTGTTCAACAGGCCAGCCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGAGACGAAATACGCGATCGCTGTTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAATCAGGATATTCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTCGGAAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAACAACTCTGGCGCATCGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAATCAGCATCCATGTTGGAATTTAATCGCGGCTTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATGTAAGCAGACAGTTTTATTGTTCATGATGATATATTTTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGAATAAATCGAACTTTTGCTGAGTTGAAGGATCAGATCACGCATCTTCCCGACAACGCAGACCGTTCCGTGGCAAAGCAAAAGTTCAAAATCACCAACTGGTCCACCTACAACAAAGCTCTCATCAACCGTGGCTCCCTCACTTTCTGGCTGGATGATGGGGCGATTCAGGCCTGGTATGAGTCAGCAACACCTTCTTCACGAGGCAGACCTC**

**Key: Guide RNA, FRT, STOP cassette, ATG, MYC, Linker, pHSG298.**

**B2RT-STOP-B2RT-7XMYC-vAChT**

**TCGACGGATCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCATTGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAAGCTCGCACATTCAGCAGCGTTTTTCAGCGCGTTTTCGATCAGCGTTTCAATGTTGGTATCAACACCAGGTTTAACTTTGAACTTATCGGCACTGACGGTTACTGATTTTGAACTTTTGCTTTGCCACGGAACGGTCTGCGTTGTCGGGAAGATGCGTGATCTGATCCTTCAACTCAGCAAAAGTTCGCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAATTTCACAAGGAAACAGCTATGACATGATTACGAATTCGAGCTCGGTACCCGGCAGGGGTCATATTTATACGCAGCACACGTCGTATTTTCATGTTTACCAAAATGGGGTGGCTGGTCGTCGAGCGCTAGAAGGTAGATAAATGTTGAAATTAGATCGGCATTGATAGCCGGCATAGCAGAGATGTTAGCTATAGGAAGTTTTTTAACACCATGAAGCCCTAATGAACTTAGAGTGGTGGCAGTTGCTGAAGTATAAGTCCAAACTGTATAATTTTTTACACAAAAACAATGAATCACTAATCACATGTATCACATGTTTACTAGATAATTCTTTCTAACGTTTAAAAAACAAAATTTTGATACTTCAGTATATGCTTGTCCACCGATACTCTTTCGAAAATTATATTTCTTATTTGAGCACAATGCTTGGGTCGACTTAAGCTCCCTTTTGTTCGCATTCAAGTATTTTCGGATGTCGTGCAAGTTGAGTGGGTCTTTTTTCTGTGAAGTAAAAGCAATAATTATAATTACTGCGTAGATGAGTGCAACCGCGTGGCTCTAAGAACACTCTACGTTTACATGCCCACAAAATCCAATTAAAATAATTGCTACACCCTTATATAATCACCCTGGACCCACAAATGTGTTCAATGAATTAATTGTAGAATTTACTTAACACGTACTTTTCGGTATTCGTTTTATGATTGAAATGTGTGTCCCTCGAAAAGAAGAACCTGAAACTGAAAGATATCCCTAATCCTATGTAATCGAAACAATGCGAATGCCACGAACTAATCCTAATAAAATACAATGTTCACCAGCAGGCAGCCTTTTGCAACACAGAAACAACATTTCAATCATAAAATAGACCCAACTAACCAGCTAATCCTAGTTAAGAGTAAGAAAGAGAAGCAGAGAGGAGCACATGTGCGAGAGAGAGAGAGTGCTGCTAAAAAATTAAGAAAATAAATGTAGCACGGCAATCAAGCTGCAAAATTAAAGAAAAGACTAACGAAATCTTGTTTCTGTGTCGTTAAAGGTTGTTCACTGGCATGCCAACAACTCGTACACCTCCAACTACAACAAGCACACCAAAACATGTAAAACCACACAGCAACAACATCAAGAGCAGGAGCAAACAATACAGTTAACCACAAGCAACGATAAACCACCTCAGAGCGGGCAATTAGCGGAGAAACGGAAGCGGCCATATTCGTAGCGAGAGCTAAGCAACGGCTGTAAGAATGGCAAGCCCGCCGATCGGCGCATAAAAGCTTTAAGGCAACAGAGAAGAGTACAAACAAGGAAAAGAAGAGAGGCAGAGAgagtttcattaaggaataactaattccctaatgaaactcTAACGTAAGCTAGCTAGACCGGTGTCGACTAAAGCCAAATAGAAAATTATTCAGTTCCTGGCTTAAGTTTTTAAAAGTGATATTATTTATTTGGTTGTAACCAACCAAAAGAATGTAAATAACTAATACATAATTATGTTAGTTTTAAGTTAGCAACAAATTGATTTTAGCTATATTAGCTACTTGGTTAATAAATAGAATATATTTATTTAAAGATAATTGCGTTTTTATTGTCAGGGAGTGAGTTTGCTTAAAAACTCGTTTAGGTTTGTCCTCCCGAAATTATTTATTTAAATGCGATGGAGAGTTGGCGCCGAATCGAAAACTTTACGCGCTTAAAAGCACGAGTTGGCATCCCTAACGCGTAGGATCTTTGTGAAGGAACCTTACTTCTGTGGTGTGACATAATTGGACAAACTACCTACAGAGATTTAAAGCTCTAAGGTAAATATAAAATTTTTAAGTGTATAATGTGTTAAACTACTGATTCTAATTGTTTGTGTATTTTAGATTCCAACCTATGGAACTGATGAATGGGAGCAGTGGTGGAATGCCTTTAATGAGGAAAACCTGTTTTGCTCAGAAGAAATGCCATCTAGTGATGATGAGGCTACTGCTGACTCTCAACATTCTACTCCTCCAAAAAAGAAGAGAAAGGTAGAAGACCCCAAGGACTTTCCTTCAGAATTGCTAAGTTTTTTGAGTCATGCTGTGTTTAGTAATAGAACTCTTGCTTGCTTTGCTATTTACACCACAAAGGAAAAAGCTGCACTGCTATACAAGAAAATTATGGAAAAATATTTGATGTATAGTGCCTTGACTAGAGATCATAATCAGCCATACCACATTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCCACACCTCCCCCTGAACCTGAAACATAAAATGAATGCAATTGTTGTTGTTAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGGATCACTAGTGATCTGGCCGGgagtttcattaaggaataactaattccctaatgaaactcGAGAGAGAGAGAGAGAGGGAGAGGAAGTCCCAAAGAAACTGGATCAGAACTTTGTACACCTCAGCAATTGAAATTAATTAATTGCAACCAAAATGGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGAGCAGAAGCTGATCAGCGAGGAAGATCTGGGCGGATCTGGCGCCTCATTCCAAATACCTGTTATCAACCTGGAGGTGCGCGAGGTCAAGGACATCGTGTGGGAGAAGATCCAGGAGCCGGTGAACCAGCGACGCCTCATCCTCGTGATTGTATCGATAGCCCTGCTGCTGGACAACATGCTGTATATGGTGATAGTACCGATTATACCCGACTATTTAAGAGAGATTGGCAGCTTCGATGACGGGCCGACGCCTCCACCGTTGAGGGATAATATCACGGGAAAGATCATACCCGTGCATCATGATCATCACGGGCAGGACTCGGCCACGGGCATCCTATTCGCCTCGAAGGCCATCGTCCAGCTGATGGTGAATCCGTTTTCGGGCGGCCTCATCGACAAGATCGGCTACGATTTGCCCATGATGATCGGCCTGACCATCATGTTCTTCTCGACGGCAGTCTTTGCTTGTGGCAGCAGCTACAGTGTCCTGTTCTTCGCCCGATCCCTGCAGGGAGCCGGTTCCGCCTTTGCGGACACCGCCGGTTTGGCCATGATAGCCGATCGGTTCACCGAGGAGAACGAACGTTCGCAGGCCCTTGGCATTGCGTTGGCCTTCATCAGTTTCGGATGCCTGGTGGCGCCTCCGTTTGGCGGAGCGCTCTACCAGTTCGCCGGAAAGGAAGTGCCCTTTCTGATCCTGGCACTGGTGTGCCTACTGGACGGGCTGATGCTGCTGCTGGTGATGAAACCGGTCAAGGAGGCGATGAAGCAAAGCAAGGATGTGCAGGACCAAGTAATACCCATCTGGCGCCTGCTGATGGATCCCTATATTGCAGTCTGTGCCGGGGCACTGACCATGTCCAATGTGGCGCTGGCCTTTCTGGAGCCAACCATTTCGCTGTGGATGGAGGATAACATGACCACTGACAACTGGAAGATCGGCATGGTCTGGCTGCCCGCCTTCTTCCCACACGTGCTGGGCGTGGTCATTACGGTGAAGATGGCCCGCAAGTATCCGCAGCACCAGTGGCTAATGGCTGCCGGTGGATTGGCCCTGGAGGGCTTCTCCTGCTTCATCATACCATTCTGCAGCGGCTACAAGATGCTCATGCTGCCCATCTGTGTGATCTGCTTCGGAATTGCCCTAATAGACACGGCTCTACTACCCACACTCGGTTATCTGGTGGACGTGCGATATGTGTCGGTGTACGGTAGTATCTATGCCATAGCAGATATATCCTACTCGATCGCCTATGCCGTAGGGCCCATTATCGCCGGCGGAGTGGTGGAGGCCATTGGGTTTACGGCTCTCAACTTTTTGATAGCCTTCTCGAATCTGGCCTATGTGCCCGTGCTGCGAAAGCTGCGCAACATCTACGACTTCAAGCCGTTCGAGAATGAGGCCAACATCCTGATGCAGGACCCGCCCAACAAAGAGTACCAGACCTATGTGATGCACGACCAGAAACCCGTCGAGGGTGGCGTCAAGAATCATCTGGAGTACGGCCAGCAGTATCAGCAGGAGCAGGAGACGAATCTGGATGACCAGCAGTACGAGTACCAGCAGCAGCAGCAGGGATACCAGCAAGGATATCAGCAGGATCAGGGCTACCAGCCGGGCTATCAGGAGCAGGGCGGCAGCTACGCCCCGCAAGGTCAGCCCCGTGTGGCCAATCCCTTCCAGCAGCAGCAGCAGCAGCAACAACAACAACAGCAGCAGGTCCAGAGCAGAGGTCCTGCCGCCCCAGCGAATCCCTTTAGGCAAGGATTTTAAACTGTTGCCCCGAACAGATACTCCTAGAAATCGTGTTCTTTTGCACACCTCCGTGTGCAATATTCTGTTCTCTGTTGAATCCACTCTAATCTAGACACAAGACACATACACATATATTATTACTATAGACATATAGGCAAGTGGTACGTACACTATAACGAGCATTACATGCAGATAGTTAAAATAGCAGCTAGTTAATGCCTTGCACCGCACCAAGTTTTGTATCATACACGAATGTTGAAGCAACCGAGAACAGTGAGTAAGGTAGGACTTGAGTTTACTTGGATGTGGAAATGGACCTAAAGGACCCAAAAAGGATGGAAAGCTTATTTTTTTTAAATCCAATTCAAAGTAACAAAATTTACGAAGGCAAGCGAAAGTGTGAACTGAATTTTTTTTTTGTAATTAACAAAGCTGATACCAAAATAGAAAGTTAATACCATATACCAATAACATTAAGCTATTTGTAAAGATGACATTATATGCGAACATTTCACTATTTAGAAATGCCAAAAAGAATCAATGTTTCAGTAATGATAACAACTCTATATTCCTATCCATGTCCAAGTAAGCCGCCAAACTACCAGGCCTAAGATATACCCATCACTAATATAACGCATATATGCTATATAGAGCGGTCCGATCGGATCGCCTATGCCCTATACTCAGTACTCATGCAGCCGTTTTCGTGTCTATCAGTCAGTGAAGCTAGAGAAACCAAAGCCTAGTCATAGATAGTTGATAAGAGGATTCGGACTCGGTATCGAACTCCCGCCCCATCAAGTATACACACAAGTATCAGATATTATATACACGCATACATATATATAATATATATATCTATATACAAGCTAGCTGTGTAAGCAGCTCAGCTGACCAGAGGACCACTTTTGCCCAAGTGCCGCCGCTTAAAAAGCAATGGCATCCATATCGCAGACATATCACAAGTTGCACAAATTGAAACCCTCCCACGCCCACTCAAAAAAGAGGAACTCCTTCGGTTGTCATTGTGGCGGACTTGGGACGAGAGTGGATTCCCGGCCAGAGGGGCTATATGATTTACGGTTTGAAAAGCATTATGATTTGAAAGTTTCTTAAACATAAGACACAACCAAGGTAACGATACATATCAGAGTCTCGATGGCTCGCCTGTTAAAATTACCAAAAGTGATATTACTTATTGCTACTAGTCTATATACATACATACATATATATCGTATCATATCGATAGCATACACAACTAGTGGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGCGATTTATTCAACAAAGCCGCCGTCCCGTCAAGTCAGCGTAATGCTCTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAACTGCAATTTATTCATATCAGGATTATCAATACCATATTTTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCATAGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACATCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTATCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATGCATTTCTTTCCAGACTTGTTCAACAGGCCAGCCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGAGACGAAATACGCGATCGCTGTTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAATCAGGATATTCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTCGGAAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAACAACTCTGGCGCATCGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAATCAGCATCCATGTTGGAATTTAATCGCGGCTTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATGTAAGCAGACAGTTTTATTGTTCATGATGATATATTTTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGAATAAATCGAACTTTTGCTGAGTTGAAGGATCAGATCACGCATCTTCCCGACAACGCAGACCGTTCCGTGGCAAAGCAAAAGTTCAAAATCACCAACTGGTCCACCTACAACAAAGCTCTCATCAACCGTGGCTCCCTCACTTTCTGGCTGGATGATGGGGCGATTCAGGCCTGGTATGAGTCAGCAACACCTTCTTCACGAGGCAGACCTC**

**Key: Guide RNA, B2RT, STOP cassette, ATG, MYC, Linker, pHSG298.**

**Genotypes:**

Figure 2: A1-4, B1-4) *yw*; *VT006486-p65ADZp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-DSCP-B2*; *VT008489-ZpGDBD*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; C1-4) *yw*; *R30E08-p65ADzp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-DSCP-B2, UAS-B2*; R53C10-ZpGdbd/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; D1-4) *yw*; *R17A04-p65ADZp*/ *B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *VT041432-ZpGDBD*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*.

Figure 3: A1-4, B1-4) *yw*; *VT006486-p65ADZp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *VT008489-ZpGDBD*/ *FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; C1-4) *yw*; *R30E08-p65ADzp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; R53C10-ZpGdbd/ *FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; D1-4) *yw*; *R17A04-p65ADZp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *VT041432-ZpGDBD*/ *FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*.

Figure 4: A1-4) *yw*; *R64G09-p65ADZp*/ *B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *R37H04-ZpGAL4DBD*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; B1-4) *yw*; *R67A06-p65ADZp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *R11F03-ZpGdbd*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; C1-4) *yw*; *R38G02-p65ADZp*/*B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*; *R24A07-ZpGdbd*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; D1-4) *yw*/ *R64F07-p65ADZp*; *B2RT-STOP-B2RT-GFP-Rab3, UAS-B2*/*+*; *R57C10-ZpGdbd*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*.

Figure 5: A1-4) *yw*/ *R64F07-p65ADZp*; *B2RT-STOP-B2RT-GFP-Rab3, UAS-B2; R57C10-ZpGdbd*/ *FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; B1-4) *yw*/ *R64F07-p65ADZp*; *R57C10-ZpGdbd*; *B2RT-STOP-B2RT-GFP-Rab3, UAS-B2; FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; C1-4) *yw*/ *R64F07-p65ADZp*; *R57C10-ZpGdbd*/ *FRT-STOP-FRT-HA-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*.

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Figure S3: A1-4) *yw*; *n-syb-GAL4*/*FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; B1-4) *yw*; *FRT-7XMYC-vAChT germline excision*/*+*; C1-4) *yw*; +/*FRT-STOP-FRT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*. D1-4) *yw*; *n-syb-GAL4*/*B2RT-STOP-B2RT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-B2*; E1-4) yw; *B2RT-7XMYC-vAChT germline excision*/*+*; F1-4) *yw*; *+*/*B2RT-STOP-B2RT-7XMYC-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-B2*. G1-4) *yw*.

Figure S4: A1-4) *yw*; *n-syb-GAL4*/*FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*; B1-4) *yw*; *FRT-6XOLLAS-vAChT germline excision*/*+*; C1-4) *yw*; +/*FRT-STOP-FRT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-FLP*. D1-4) *yw*; *n-syb-GAL4*/*B2RT-STOP-B2RT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-B2*; E1-4) yw; *B2RT-6XOLLAS-vAChT germline excision*/*+*; F1-4) *yw*; *+*/*B2RT-STOP-B2RT-6XOLLAS-vAChT*, *UAS-CD8-mCherry*, *UAS-DSCP-B2*. G1-4) *yw*.