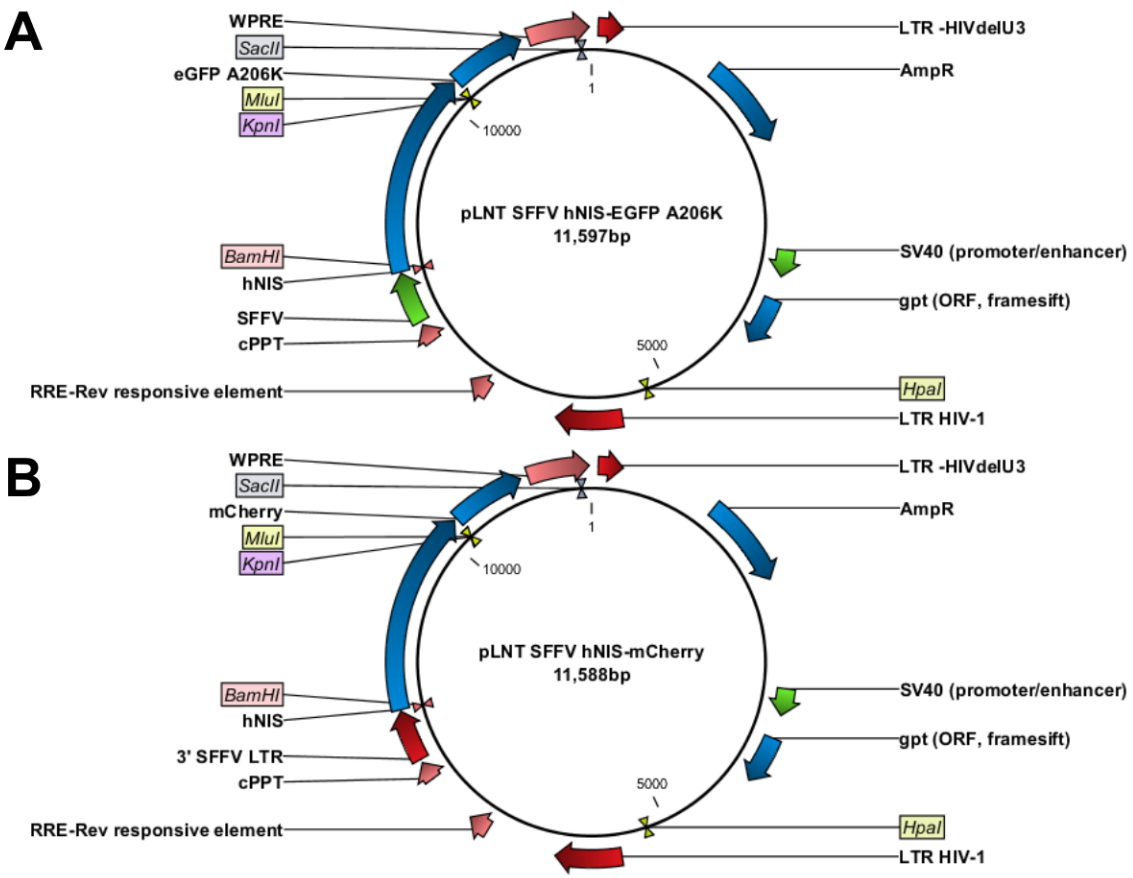
Supplementary Information

Cell transfection: The linear polyethyleneimine (PEI; 25 kD, linear) transfection method is an efficient and inexpensive option (see https://www.addgene.org/protocols/lentivirus-production/). Alternative methods involve successfully used for these cells include calcium phosphate transfection as well as several commercially available but proprietary transfection reagents including but not limited to Fugene 6, Lipofectamine LTX, Escort IV, TransIT-293.

Cell transduction: A more general protocol is provided in the Addgene protocol section A more general protocol is provided by Addgene here: https://www.addgene.org/protocols/generating-stable-cell-lines/

Cloning details for the generation of the fusion reporter plasmids encoding NIS-mEGFP and NIS-mCherry. The lentiviral backbone pLNT/SFFV (a kind gift of Prof A. Thrasher, University College London, UK) was cut with the restriction endonuclease *MluI*. Monomeric green fluorescent protein EGFP A206K (mEGFP) was amplified by PCR from the mEGFP plasmid (Addgene #18696) using the following primers: 5'-AAAACGCGTGGAGGTGGCGCCACCATGGTGAGCAAGGGCGAGGAGC-3' (forward primer) and 5'-GATGCGCGCGAATTCTTACTTGTACAGCTCGTCCATGCC-3' (reverse primer). Monomeric red fluorescent protein mCherry was amplified from pmCherry-N1 (Clontech) using the following primers: 5'-AAAACGCGTGGAGGTGGCGCCACCATGGTGAGCAAGGGCGAGGAGG-3' (forward primer) and 5'-GATGCGCGCGAATTCTTACTTGTACAGCTCGTCCATGCC-3' (reverse primer). Both resultant PCR pieces were cut with both restriction endonucleases *MluI* and *BssHII*, and subcloned into the prepared pLNT/SFFV vector. The resultant vectors were named pLNT/SFFV MCS mEGFP and pLNT/SFFV MCS mCherry, respectively. The DNA of human NIS was amplified from cDNA by PCR and subcloned between the *BamHI* and *KpnI* restriction sites in either of the latter vectors using the following primers: 5'-AAAGGATCCACCGCCATGGAGGCCGTGGAGACCGG-3' (forward primer) and 5'-AAAGGTACCGAGGTTTGTCTCCTGCTGG-3' (reverse primer). The resultant plasmids encoded for either NIS-mEGFP or NIS-mCherry and were both confirmed by sequencing. For plasmid maps see Supplementary Figure.



Supplementary Figure. Maps of pLNT SFFV hNIS-mEGFP (A) and pLNT SFFV hNIS-mCherry (B) plasmids.