

Supplementary Materials:

Table S1. Sequences for the homing peptides used in this study.

Homing peptide	Sequence (aa)	Receptor
GFE-1	CGFECVRQCPERC	membrane dipeptidase [86][68]
GFE-2	CGFELETC	membrane dipeptidase [86] [68]
MTDH domain	GLNGLSSADPSSDWNAPAEWGNW VDEDRASLLKSQEPISNDQKVSD DDKEKGEGALPTGKSK	lung endothelium putative receptor [80]

Table S2. Sequences used for homologous recombination vector synthesis.

Name	Sequence (bp)
10A (HR arm1)	cgtgctaacttccaagcggaccagattatcgctaagtagcgaatgggccacgggtgg tcttcgccagaagctgctggtgcagtggttttcaaagtggag agcataacccttggggcctctaac
10A (HR arm2)	gggtcttgaggggtttttgctgaaaggaggaactatat gcgctcatagatatgaacgttgagactgccg
10B (HR arm1)	agcataacccttggggcctctaacgggtcttgaggggtttttgctgaaaggag gaactatat gcgctcatagatatgaacgttgagactgccg
10B (HR arm2)	ctagcataacccttggggcctctaacgggtcttgaggggtttttgctgaaagga ggaactatatg cgctcatagatatgaacgttgagactgccg
RBS	aaagaggagaaa
<i>trxA</i>	atgagcgataaaatcattcacctgaccgatgactctttgataccgacgtgctgaaa gctgatggtgcaattctggtgatttctgggcagagtggcgcccttgcaaaatg atcgctccaatctggacgaaattgcggacgaatatcagggtgaagctgactgtggc caaactgaacattgaccagaaccctggcaccgcaccgaatacgggtatccgtggc atcccaactctgctgctgttcaaaaacggtgaagtggcagcaacaaagtaggcg ctctgtctaaggccaactgaaagagttcctggacgccaacctggcctaataga
pSMART (IDT)	CCCGTGTAACGACGGCCAGTTTATCTAGTCAGCT TGATTCTAGCTGATCGTGGACCGGAAGGTGAGCCAG TGAGTTGATTGCAGTCCAGTTACGCTGGAGTCTGAG GCTCGTCCTGAATGATATGCGGCCGCGGAGGGTTG CGTTTGAGACGGGCGACAGATATCAGTTCTGGACGA GCGAGCTGTGCTCCGACGCGTGATCTTACGGCATT TACGTATGATCGGTCCACGATCAGCTAGATTATCTA GTCAGCTTGATGTCATAGCTGTTTCTGAGGCTCAAT ACTGACCATTAAATCATACCTGACCTCCATAGCAG

AAAGTCAAAAGCCTCCGACCGGAGGCTTTTGACTTG
ATCGGCACGTAAGAGGTTCCAACTTTCACCATAATG
AAATAAGATCACTACCGGGCGTATTTTTTGAGTTATC
GAGATTTTCAGGAGCTAAGGAAGCTAAAATGAGTAT
TCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGG
CATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACGCT
GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTG
CACGAGTGGGTACATCGAACTGGATCTCAACAGCG
GTAAGATCCTTGAGAGTTTACGCCCCGAAGAACGTT
TTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGG
CGCGGTATTATCCCGTATTGACGCCGGGCAAGAGCA
ACTCGGTCGCCGCATACACTATTCTCAGAATGACTT
GGTTGAGTACTCACCAGTCACAGAAAAGCATCTCAC
GGATGGCATGACAGTAAGAGAATTATGCAGTGCTGC
CATAACCATGAGTGATAAACTGCGGCCAACTTACT
TCTGGCAACGATCGGAGGACCGAAGGAGCTAACCG
CTTTTTTGCACAACATGGGGGATCATGTAACCTCGCCT
TGATCGTTGGGAACCGGAGCTGAATGAAGCCATACC
AAACGACGAGCGTGACACCAGATGCCTGTAGCAA
TGGCAACAACGTTGCGCAAACTATTAAGTGGCGAAC
TACTTACTCTAGCTTCCCGGCAACAATTAAGACT
GGATGGAGGCGGATAAAAGTTGCAGGATCACTTCTGC
GCTCGGCCCTCCCGGCTGGCTGGTTTATTGCTGATAA
ATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCAT
TGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGCAT
CGTAGTTATCTACACGACGGGGAGTCAGGCAACTAT
GGATGAACGAAATAGACAGATCGCTGAGATAGGTG
CCTCACTGATTAAGCATTGGTAATGAGGGCCCAAAT
GTAATCACCTGGCTCACCTTCGGGTGGGCCTTTCTTG
AGGACCTAAATGTAATCACCTGGCTCACCTTCGGGT
GGGCCTTTCTGCGTTGCTGGCGTTTTTCCATAGGCTC
CGCCCCCTGACGAGCATCACAAAAATCGATGCTCA
AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAG
ATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCG
CTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTG
TCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTC
ATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGT
CGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC
CGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTA
TCGTCTTGAGTCCAACCCGGTAAGACACGACTTATC
GCCACTGGCAGCAGCCACTGGTAACAGGATTAGCA
GAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGA
AGTGGTGGCCTAACTACGGCTACACTAGAAGAACA
GTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCT
CGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAC
AAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAA

GCAGCAGATTACGCGCAGAAAAAAGGATCTCAAG
AAGATCCTTTGATTTTCTACCGAAGAAAGGCCCA

Table S3. Primers used in this study.

Primer	Sequence (bp) 5' to 3'
HP-fwd-1	agaacaaggccgcacttacga
HP-fwd-2	aaggagattattgCGGcttgactaa
HP-rev-1	tcagcggcagttcaacgtt
HP-rev-2	tagacgccagaatgtcggtcaca