

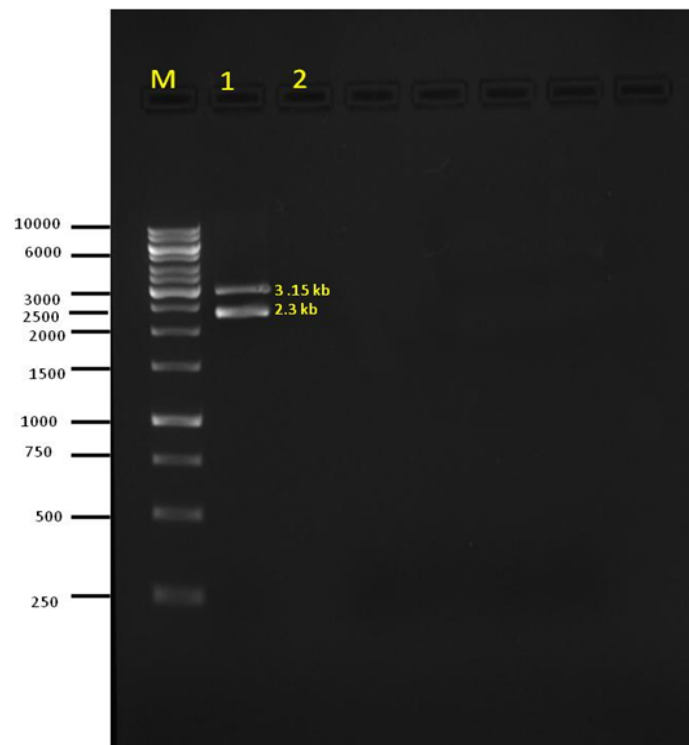


Fig. S1 Restriction digestion of eCFP-SiaP-Venus by *Bam* HI and *Hind* III in pGEM®-T Easy vector. M=DNA marker and Lane 1 Digested products

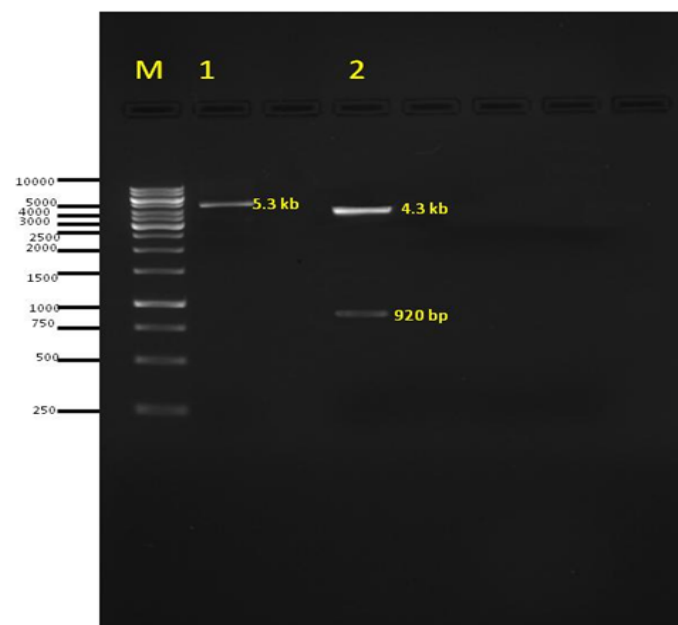


Fig. S2 Restriction digestion pRSET-eCFP-SiaP-Venus by KpnI. SiaP gene (920bp) and pRSET-B vector with eCFP and Venus (4.3 kb);

5'AGTAAAGGAGAAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGGTGATG
TTAATGGGCACAAATTTTCTGTCAGTGGAGAGGGTGAAGGTGATGCAACATACGGAAAAGTT
ACCCTTAAATTTATTTGCACTACTGGAAAAGTACCTGTTCCATGGCCAACACTTGTCCTACT
TTGACTTGGGGTGTTCATGCTTTTCAAGATACCCAGATCATATGAAACGGCATGACTTTTT
CAAGAGTGCCATGCCCCGAAGGTTATGTACAGGAAAGAACTATATTTTTCAAAGATGACGGGA
ACTACAAGACACGTGCTGAAGTCAAGTTTGAAGGTGATACCCTTGTTAATAGAATCGAGTTA
AAAGGTATTGATTTTAAAGAAGATGGAAACATTCTTGGACACAAATTGGAATACAAGTATAT
TTCACACAATGTATACATCACTGCAGACAAACAAAAGAATGGAATCAAAGCTCATTTCAAAA
TTAGACACAACATTGAAGATGGAAGCGTTCAACTAGCAGACCATTATCAACAAAATACTCCA
ATTGGCGATGGCCCTGTCCTTTTACCAGACAACCATTACCTGTCCACACAATCTGCCCTTTCG
AAAGATCCCAACGAAAAGAGAGACCACATGGTCCTTCTTGAGTTTGTAACAGCTGCTGGGAT
TACACATGGCATGGATGAACTATACAA3'

Fig. S3 Complete gene sequences of eCFP without restriction sites.

ATGGTGAGCAAGGGCGAGGAGCTGTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGAC
GTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGAC
CCTGAAGCTCATCTGCACCACCGGCAAGCTGCCCCTGCCCTGGCCCACCCTCGTGACCACCCTCGGC
TACGGCCTCAGTGCTTCGCCCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATC
CCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCG
AGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAG
GACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACGACTTCAAGGAGGACGG
CAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCGACAAACATCGAGGACGGCGGCGT
GCAGCTCGCCGACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCCGACAA
CCACTACCTGAGCTACCAGTCCAAGCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCT
GCTGGAGTTCGTGACCGCCGCCGG GATCACTCTCGGCATGGACGAGCTGTACAA

Fig. S4. Complete gene sequences of Venus without restriction sites

cggggtaccgATTATGACTTGAAATTCGGTATGAATGCTGGAACCTCATCAAATGAATATAAAGCGGCAGAA
ATGTTTGCCAAAGAAGTCAAAGAAAAATCACAGGGTAAAATTGAAATTTCACTTTATCCAAGTTCACAATTA
GGTGATGACCGTGCAATGTAAAAACAATTAAGACGGTTCTCTCGACTTTACCTTTGCAGAATCTGCTCGC
TTCCAGCTGTTTTACCCTGAAGCGGCAGTATTTGCCTTACCTTATGTTATTAGCAACTACAATGTTGCACAAA
AAGCCTTATTCGATACAGAATTCGGTAAAGATTTAATTAATAAAAAATGGATAAAGATCTTGGCGTGACTTTAC
TTTCCAAGCTTATAACGGAACTCGCCAAACGACTTCAAATCGTGCAATCAACAGTATTGCAGATATGAAAG
GCTTAAACTTCGTGTGCCAAATGCAGCAACAACTTAGCCTATGCTAAATATGTTGGTGCATCACCAACAC
CAATGGCATTCTGAAGTTTATCTTGC GTTACAAACCAATGCCGTCGATGGTCAAGAAAACCCGTTAGCAG
CGGTGCAAGCACAAAAATTCTATGAAGTGCAAAAGTTCTTAGCAATGACTAATCATATTTTGAATGACCAAC
TTTATTTAGTAAGCAACGAGACTTATAAAGAACTCCCTGAAGATCTTCAAAAAGTCGTAAAAGATGCTGCCG
AAAATGCAGCAAAATATCACACTAAATTATTCGTAGATGGAGAGAAAGATTAGTCACATTCTTGAAAAA
CAAGGCGTGAAAATTACACATCCTGATCTTGTTCCATTTAAAGAATCAATGAAGCCGTATTATGCTGAGTTT
GTAAACAAACAGATCAAAAAGGTGAATCAGCTTTAAACAAATTGAAGCAATCAATCCAGAAGGGGGAT
CCCACCACCACCAACACcggggtaccg

Fig. S5 HI0146 gene sequence without signal peptides and with *KpnI* restriction site

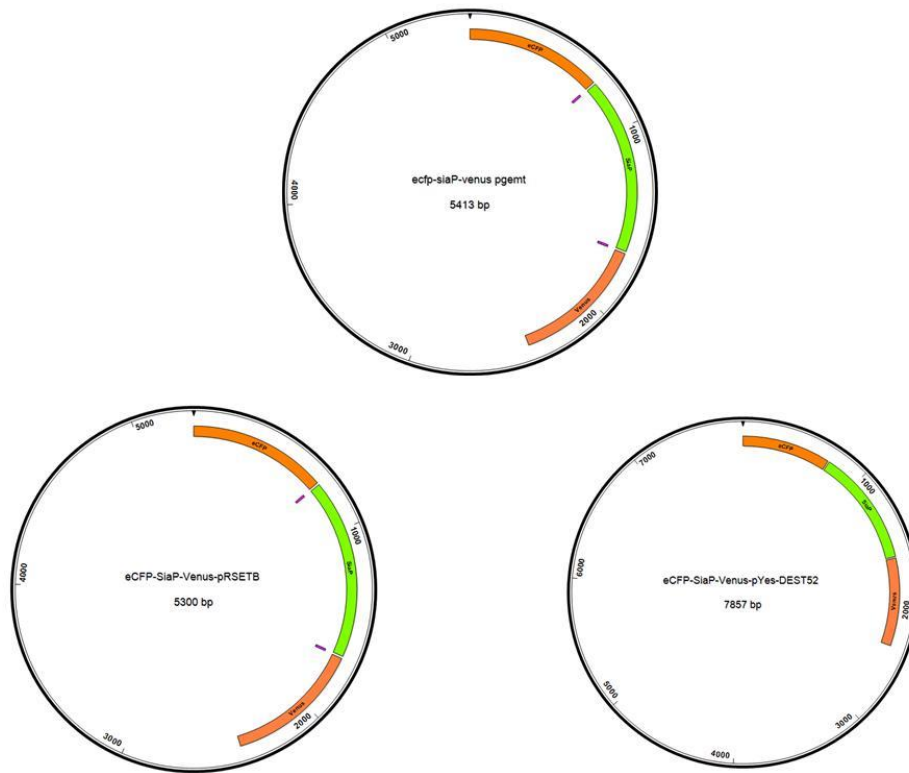


Fig. S6 Construction of FLIP-SA map in cloning (pGEM-T easy) and expression (pRSET-B and pYES-DEST 52) vectors