

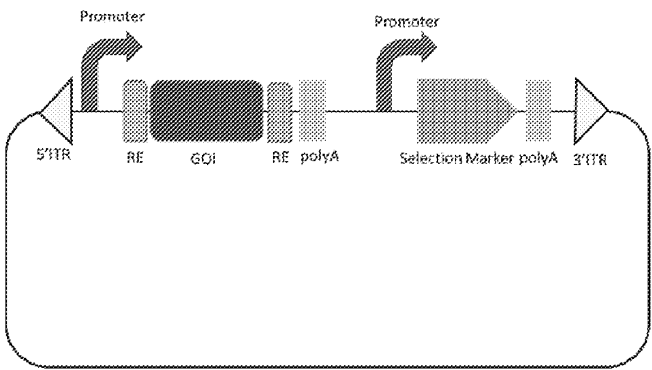


FIG. 1A

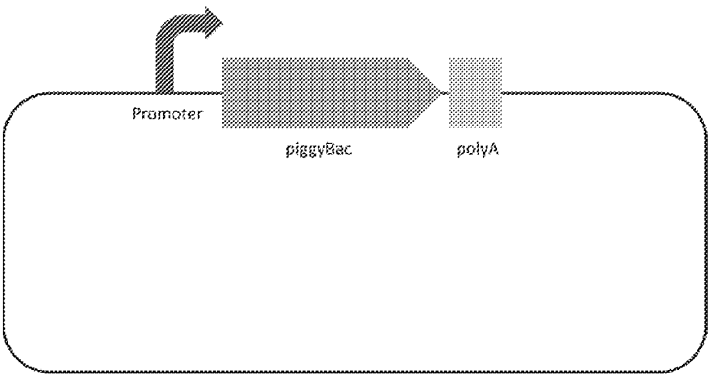


FIG. 1B

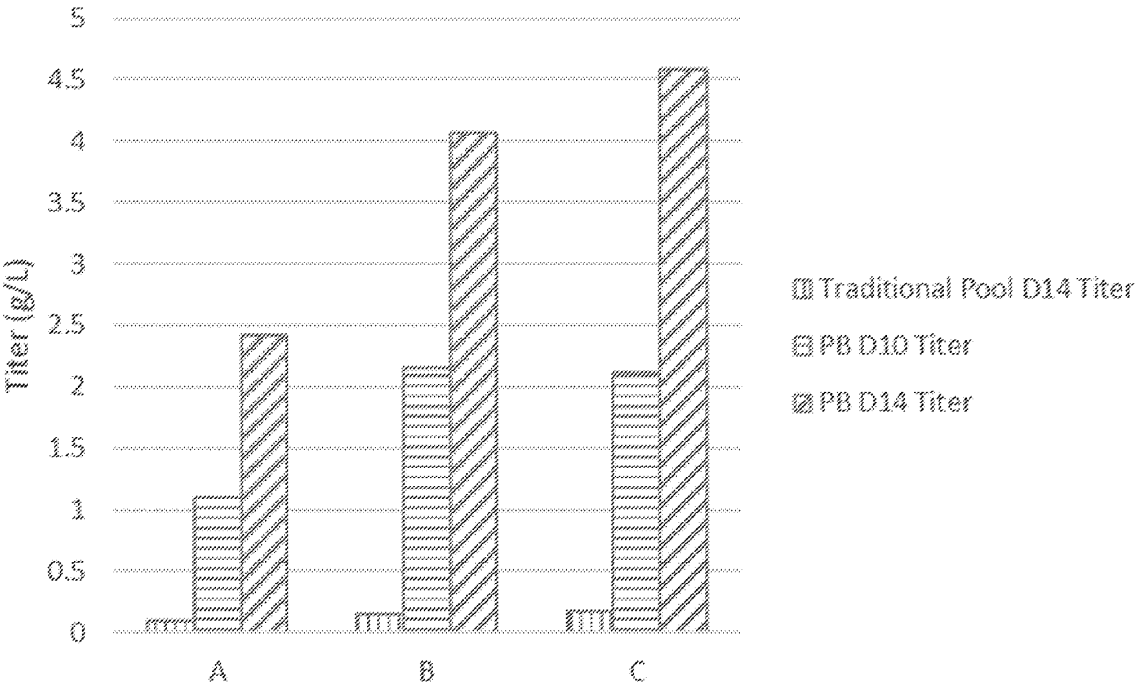


FIG. 2

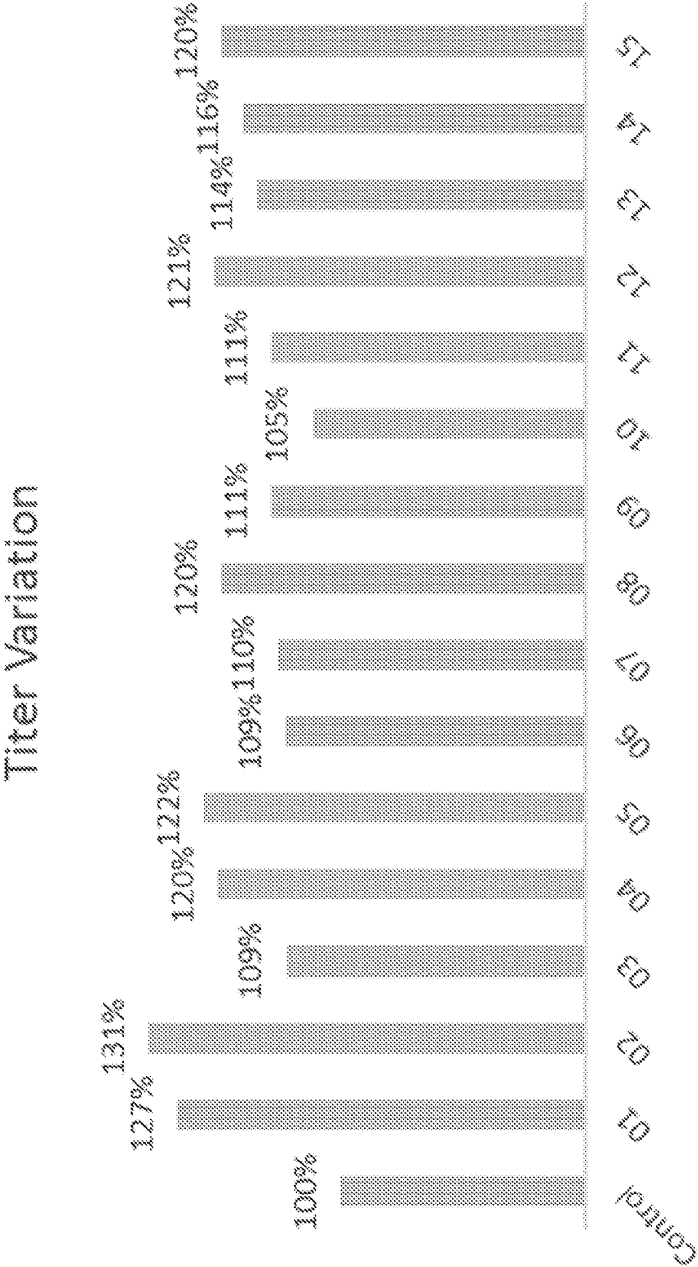


FIG. 3

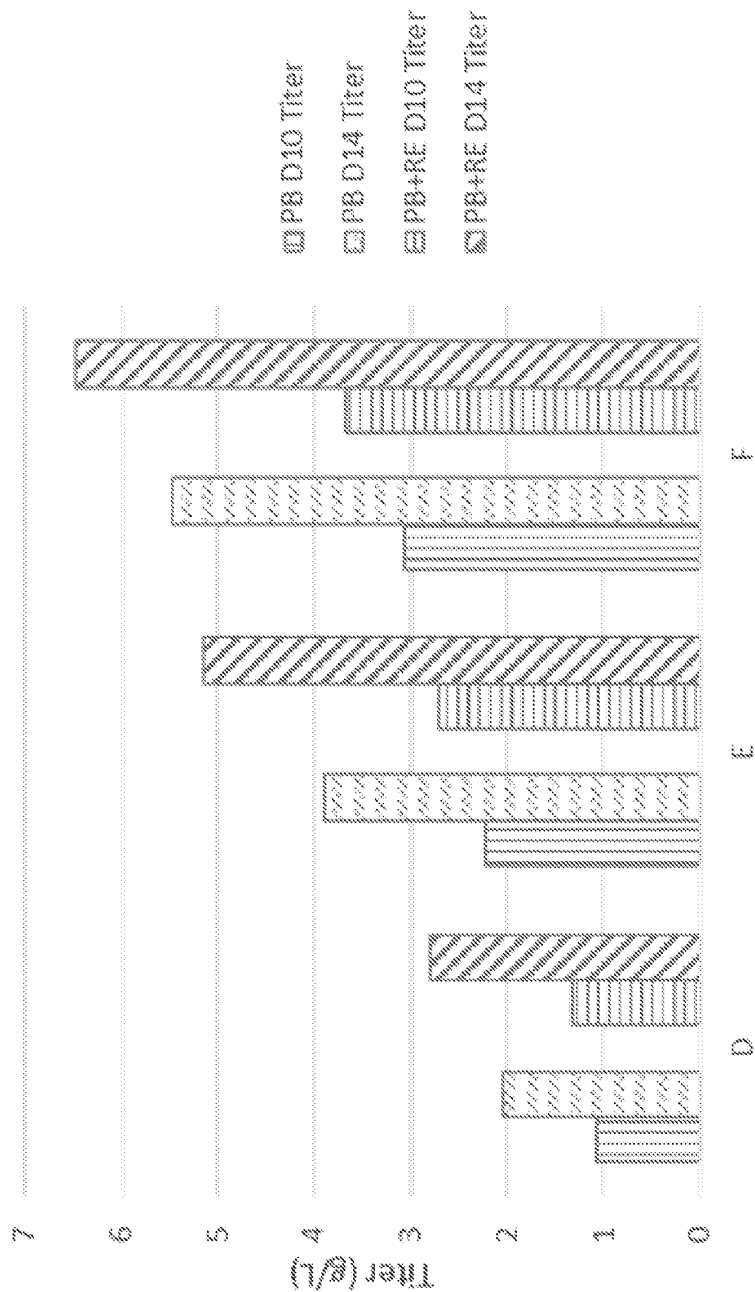


FIG. 4

- (1) *PB transposase 5'-recognition site (TR_L is indicated by single underline, IR_L is indicated by double underlines)*
TTAACCCTAGAAAGATAATCATATTGTGACGTACGTTAAAGATAATCATGCGTAAATTTGACGCATGTGTTTATCGGCTCTGTATATCGAGGTTTATT
TATTAATTTGAATAGATATAAGTTTTATTATATTTACACTTACATACTAATAATAAATTCACAAACAATTTATTTATTTATTTATTTAAAA
AAAAACAACAACTCAAAATTTCTTCTATATAAGTAACAAAAC (SEQ ID NO: 31)
- (2) *PB transposase 3'-recognition site (TR_R is indicated by single underline, IR_R is indicated by double underlines)*
TATCTATAACAAGAAAATATATATATAATAAAGTTATCACGTAAAGTAGAACATGAAATAACAATAATAATTATCGTATGAGTTAAATCTTAAAAAGTCACG
TAAAAGATAATCATGCGTCATTTTGACTCACGCGGTCGTTATAGTTCAAAATCAGTGACACTTACCGCATTGACAAGCACGCCCTCACGGGAGCTCCAA
CGGCGGACTGAGATGTCCTAAATGCACAGCAGCGGATTCGCGCTATTAGAAAAGAGAGAGCAATTTCAAGAATGCATGCCGTCAAATTTTACCGAGAC
TATCTTTCTAGGGTTAA (SEQ ID NO: 32)
- (3) *PB transposase amino acid*
MGSSLDDEHILSALLQSDDELVGEDSDSEISDHVSEDVQSDTEEAFTIDEVHEVQPTSSGSEILDEQNVIEQPGSSLASNRIILPQRTIRGNKHCHW
STSKSTRRSRVSAINI VRSQRGPTRMCRNI YDPLLCFKLFFTDEI ISEIVKWTNAEISLKRRESMTGATFRDTNEDEIYAFGLIVMTAVRKDNHMST
DDLFDRLSMVYVSVMSRDRDFLI RCLRMDDKSIRPTLRENDVFTPVKKIWDLFHQCIQNYTPGAHLTI DEQLLGFGRGCPFRMYIPNKP SKYGIK
ILMDCDSGTKYMINGMPYLGRGTQTNVGPLGEYYVKELSKPVHSGCRNITCDNWFTSIPLAKNLLQEPYKLTIVGTVRSNKR EIP EVLKNSRSPVGT
SMFCFDGPLTLVSYKPKPAKMVYLLSSCDEDA SINESTGKPQMVMYXNQTKGGVDLIDQMC SVMTC SRKTNRPWPMALLYGMINIACINSFI IYSHNVS
SKGEKVQSRKKFMRNLYMSLTSSFMKRKRLEAPTLKRYLRDNISNILPNEVPGTSDDSTE EPPVMKKRTYCTYCP SKIRRKANASCKKCKKVICREHNID
MCQSCF (SEQ ID NO: 33)

FIG. 5

WXRE ID: A (SEQ ID NO: 35)

[illegible]

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GAACCAGACACAGGGACACACACCTTAAAGAACCAAGGTTGTGCTCAAGGGTAAAGGCACCTGGCCCTATAAGACTAGTGATACGAGTTGGAAGGAG AGAGAGATTTCCTCTGACCTTTACATGAGCTGTTGTAGCATACACAGAAATACACTCATCATGTAAACACACATAACATATGCACAATGTTGCTTTTCA CTAAATCTTTTCTTTCTTTCTTTTGGTTTTTCGAGACAGSGTTTCTCTGTGTAGCTTTGGAACCTATCCTGGCACTCCTCGCTCTAGAGACCAG GCTGGCCTCGAACTCACAGAGATC	WXRE ID: I (SEQ ID NO: 43) GATCTGAAGTTTGGATCTGCGAGAACCCACACAAAGGCTACGGGCTTAGTAGTGTAACCTGCAATTTACGACACTTGGAAAGGCTGAGAAAGGATCCCAAG GGCAGCTGGTAGTAGTGGCTAGTGTAGCTGAGAGCTGGGTTCTGGAGCGCACTGTGTTCACTGAATAAGATAGAGAGTGACATCAGCTTTGGGC TTCCACAGCAAAATGAGTCACTTGCATGCAAAACAGAAATGCAAAACAGATGCAAAACCAAAACAAAGGAACACAGGCCAAAGGTGGGTCAATTCCTAT ACCATCCCCTCAGCAGGGTGCAGTCCCCACACCCCTGACCCAGTTCCTCATGATGTAGAGAAATAAATTTGCCCCCTTCAACGAACATTTTCAGCTC CAAGAGAACCTGGCCCACTTTGAAAGCTTTAATTAGAAATGTGCAATACCCGGAACAGATGTCTGTGTGATTGTGGAGACATAGGTTAAAGAAATCA CACAGCAGTTTGCCTGGTTACAGAAAGGTGCAAGTAACTTTAAACACAGTTTGTGTAAGTCTCCAACATGTTACCTAACATAGCATGGCCTCGATT ACATGTAAGCAGTGAGTCTCCGGCTGCCTGGTTTGTGAGGGTAATGTACTTCAGCAATAGTGTGAGGCTGTACAGTGAGTGACTCATCACCTTAAAA AAGTATCGAATCCAGTCTTCAGAGTTAGCTTTCACTAAAACCAAGTCAGTGGTGAATGGTCACTAGGTAAAGGCACCCGCTGCCAAGCCCAAGAC CTGTGCTCTGCTCCCTGGGATCCAGTTGGTGGAAAGAGAGAACGGACTCCTGCAAGGTGGCCCTCTGACCTACATGCCTGAATTCCTGCCAGACATTAAGT AAAAACAAACGCAAAAGGGAAAGTGGGCTACGCATAAAGCACTCACTGGACTCTACTCTTCTACTCTGTGGTTACTTTTGGTTCTCAAGCATACCA TACCTTGATCTACATGATTTTACTCCAAAGACACAGCCAGGTAATGTGTGTGATGGATCAGTCTATTGTGTACTTTGTTTACTAGTACTTACTGA GATTGTCGATGGCTTTAATGTCAACATGAGTGTGGAGATC
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CATACTCCTCAGGGCCTCTTTCTCATGAGTGACCTACCGGATACCAACCTCTCTCCTAGTACCTTGAGAAAGCAAAACCCAGAACAGGAAATAAAGG TCAAAATAGAGGTCAATAGGAAGAAAGCAGGCCTAATATTAAACACTTTTAAAGAAATACTAACTGGGTGACTGTCCAAAAGCCGACACATGTCTAATGG TGTTGAATGCCATTCTTATCTAGAAATTGCTTAGAAGTGATC
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Reverse complementary sequences for WXRE

[illegible]

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WXRE ID: D (SEQ ID NO: 50)

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AATTTTGAACAGTTTTTCTTTTGTAAACCTGGCTATCTTTCTGCTCAGAGATACTTTTGCCTATATCTACAGGTGTTGAGATTAATACTTGAA
CCAGTGTGCTGCGTAAATCTTTTAAAGTTTATTTGATTTCTGTTGATTAAAGAAATCCCCCAAAATACATATCTAAAGCAAGATCCAGAG
TGCAATGGTCAAGTCTCTTGGCTAGCTGGAGTTCACTGCTACAGTTCTCTTGGACACCTAGATAAAACCTTGGTATCAGCAGGGACTGTTAGCT
CAAGATTAACTGCCTGTAATGCAAGACTATGGAGGTAAAGCTGGGAGATATTTCAGAGTTTGGCCTAGTCTGGGCAACTTACTAAGACTCTTCT
AAAAATACCCAACAAATGAGAGGCACAGTGTACACACTGTCACTCAGCACTTAGAATTAGCGCTGGATAATCAAGCCTGCAAGGTCTCTCTGTG
CTATGTAGAGCTCAAGTGAATGTGCATACATGAATCTGTGTAAAGAAAGAAATAGCCAAACAAACCTACACACCAACAAAGAACCAATGAAAA
CTGTATTGTCTTGTATCTACCCATAGTCACTAGAGTTAGGAAGCAATAACCTAAAAAGATTTAAAAAGAGCAGGCAATAGTGGTGCACGCTTT
AATCCAGCACTCGGAGGAGAGGCAATTTGCATCTCTGTGAGTTAGAGGCCAGCTGGGAGCTTTGAACAGCATCAATTTGATGCAAGATAAAT
GCCATTAAACACAGGGAATCTCTAAAATGTTGGGAAGAAATCAATCTCTAGCCCTAACAAAGGTAAACATCATCTCTTTCATTACAAATTC
ACTTTAAATTTGGGTAGTGAATTACCTGTACCATGTATCCAGCAATCCCACTAGAGGCTTAGACAGTAAAAATAGGCTACAGTATACCCAGGA
GCTCCAGACAGCCATGACATCTTCAAGAACTAAAAAAATTTAAAACTAGGGAGCTGTTAGGATATCAGTCAGGCAATATAGATGAACCACTAC
ATCCTCCCTTACTCACAATTCCTTTGACGAATGCAATGGATGAGAGAATCACATTCGACTGCTAGTTCCCATTAAGACGGCTGGACTCCATCTTG
GCTCAAGGGCAGAGTTTCATAACTGTCTTAGGAAATCATAAAACTAAAGGTCAAGGTGTGGCTACAGTAGGATATTGCATCATGGCATGGGGTG

[illegible]

19/31

TTTTTAACTACTGACAAAGTTGCTCTAGTAACCCAAAGAGTGAAGAGAAAAGCAGCTGCCTCACCGCCCCAGATATTTGATTTGTTCCAGATGTTTCAA TGCCCTCATGATACAAATAAACCCACAAAAATTTTCTTAACAGTTTAAATTTGTTTAAATAGTTAAATAGCTCTTTGGGCATCAACAGATTCTGACCAATT GTCTCTCATTTACCCCTCCCATCTCTGCCTCATGTTAAACAATACCTGCTGCAAGGACAAATGACTGAAGTTAAACAGTCCCAACAAAGTTTCTTTCA AGCCTGCTAGGCCAGAGTTCTCTCCAACCCACTTGGTCTTTGAAAGCTGGAGAGTGAAGCAGTCTGGCCTGAAGCTTATCTTGTAAGTGAAGAC TCTAAAGTGAGTTCTGTCTGACACCTCCTGTAGCCTCTGCTCTGAGTCTAGTAGCAGGATAGATGATTTCTGTAGCTGTAGAAACACCTTGATAAATA TGGTTTCCCATGTTTAGATTCTATGGGTGAAGTCCCGGATGGACCTGCTCTATTCCCAAAAGGGTCAGGATCACATTCAGAGTGCCACATTCGCCGA GCAAGCAAGAGATGTTGTACTGC	<i>WXRE ID: I (SEQ ID NO: 55)</i> GATCTCCACACTCATGTTGACATTAAGCCATCGACAACTCTCAGTAACTACTAGTAAACAAAGTAAACAAATAGACTGATCCATCACACAAACATTACCC TGGCTGTGCTTTGGAGTAAAAATCATGTAGATCAAGGTATGGTATGCTTGAACACCAAAAAGTAAACCACAGAGTAGAAGAGTAGAGTCCAGTGAGTG CCTTATGCGTGAGCCCACTTCCCTTTTGGCTTTGTTTACTTAAATGCTGGCAGAAATCAGGCATGTAGTCAAGAGCCACCTTGACGAGATCCGT TCTCTTTCCACCAACTGGATCCAGGACAGGACACAGGCTCTTGGGCTTGGACGGGTGCCCTTACCTACTAGGCCATTTACACCACTTTCACCACTGACTTGGT TTTACTGAAAGCTAACTCTGAAGACTGGAATTCGATACTTTTTAGGGTGATGAGTCACCTCACGTACAGCCTCAGCACTATTGCTGAAGTACATTAAC CCTCACAACCCAGGCAGCCGAGACTCACTGCTTACATGTAATCGAGGCCATGCTATGTTAGGTAACATGTTGGAGACTTACCAAAAACCTGTGTTTAA AAGTTACTTGCACCTTCTGTAAACCACGCCAACTGCTGTGATTTCTTTAACCTATGCTCCACAATCACACAGACATCTGTCCGGGTAAATGCAC ATTTCTAATTAAGCTTTCAAAAGTGGCCAGGTTCTCTTGAGCTGAAATGTTCTGTGAAGGGGCAAGTTATTTCTCTAACATCATGAGGAACT GGGTACGGTGTGGGACTGCACCCCTGCTGAGGGATGGTATAGGAATGACCCACTTTGGCCTGTTCCTTTTGTGTTGTCATGTGTTTG CATTTCTGTTTGATGCAATGCAAGTGAAGTCAATTTGCTGTGGAAGCCCCAAAGCTGATGTCACCTCTCTATCTTATTCACTGAACCAAGATCGCTCCAGAAC CAGAGCTCTCAGCTAACACTAGCCTAGCTAGCCAGCTGCCCTTGGGATCCTTTCTCAGCCTTCCAAAGTGTGAAATTCAGGTACACTACTAAGCCCCG TAGGCCCTTTGTGGGTTCTGCAGATCCAAACTTTCAGATC	<i>WXRE ID: J (SEQ ID NO: 56)</i> GATCACTTCTAAGCAATTTCTAGATAAGAATGGACATTCACACCCATAGACATGTGCGGCTTTTGGACAGTCAACCCAGTTAGTTATTCTTAAAAAGT GTTAAATATTAGGCCCTGCTTCTTCCCTATGACCTCTATTGACCTTATTTTGAACCTTATTTTCCGTCTCTGGGTTTGTCTTCCAGGTACTAGGAGAGAGTTGGT ATCGGGTAGGTGCACTCATGAGAAAGAGGCCCTGAGGAGTATGAGAGTACAGCCAGAGGCCCTTTCTTTTGGACCTGCCCAACTGAACACAAAC AACAAAAACCCAAACAAACAAACAAACAACTTACTAAAAATCCAAAGGAAATGAAGAACTATAGATGGAATGAACACAGGCAAGGCA TACCTATTCTTATAGGCAGCTAGTTTAGCCCACTGGTAGCCCACTAGATGTTGCACTCTGAGCCTGATACACAGGCCACATACAACATATGCTCCTC TGGTCTGCCACCCACCTAGCCATTGTACTGGCTAACAGTCTGGGGGGTGGAAATGAAGATGGTGATTAATAGGATGTTACAGTAAGTGCT CAATGCACACATAAGTTCTCAGCAGGGGAAAGTCAGGCTAGTTGGTGGACACTCATCTGGTCCACCTTAGAGTGATAAGATGTGGTCTAGGCTAT AGACAGGTGCTTCCCTTCCGTGGCCATATCAGGCCCTGAGCAACAAAGAAAGCAAGCTGCCTAGAAATCTCTTAGGGGTCCATTTCCAGCCTGGC TCCTCCAACTGGTTCTTCTTGGGTTCAAGTACAGATTGCTCAAGGGTTTGGCTTCTTGTAGCCCTCACTGGCAGGGCTTATGTGGGCTTCAAC TTCTGTCCCCAAAGTTCACTGTCTGACCTTGCATGGATCCAGGAGGCACTGGGTCTCAACTACCATGTGACCCAGCCATGCATCTGGGCTGAT GTTCCCCCAAGATTGCATGAAGGCCCTTAAACTCTCAGTCTTGTCTCAAAGCTTTTATGCTAGACAGTAGTCTTGAGCTGTAGGGGACTTACCTAG
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ACATATCCCTGAGAAACCCAGGCTGCAGGCAGAGGAACATTGTGGCAGCTTACTCAGAGGATGGGAGGACATGCCATTGTCTATCACTAAGGAGATGT AGACCAGTTGACCAGCCCAGTAAGCCCTGGGTTTTCCAAACCTTCAGGAGCTTTGCCGTGAATTTTCAGGTATGAAAGTTTGGCACACTGAAAGGCCATAC AGGTGGAAGAGTCCATCCAAAACCTCTGCCTTGGTGGGAGGATATCAATGAACATATTGGATGCTTGGTGAGCATGAAATATCCTGAATGGCCATTGGT CCAGGGTAAGACAGGTCTCAATTTCTCCAGAGCCCCACAGTACTTAAGGAAACCTGGCTTAGCTGACTGTCCCTGCCCTTGGCACTTGTGATATGTA AGTTCCTACCATCTCATCTTTGACTCGGGATGAGGGCTGTGGATAGGGGACAAACCTTGCTGAAGAACACAGAAAGAACCTTCTCCTTCTCTCTCC AGCTGCTCATAGAACGACGACCTTCTGAGTCCACAAAAGATC	<i>WXRE ID: K (SEQ ID NO: 57)</i> GATCCAGCTATTAGAATGGTGCCTTGCAATTTAAAGGTAACCAAGGGAATATTAGGCTCCTAAATCAAGTAGTCCAAAACATGTCTATGCAACCTGACAC TTTGGTTATTATGAATTAAGATATTGAGAAATGGCAATATAGGACCATTTCTAATTTTGGGAGATGTGACAGAATCCATCCTTTCATTAGGAAA ACAAATGATTTACTAATGGTAGAGACCAAGAAAGGCATGAACATCCTAAAAGTTGTCATCCTTAAAGCCTTCATGCAAAATGTAGTTGCTTTCTCA CAACTTGTCACCTTTTAAAGCTACATCAATATCTAATAAATGGCTTTTTCATTCAGTCTTTTAAAGTATTTGTTATCTTGTCTTGGTGGCACT GACAAAATTGCACATAATAATTTGACTTTTCCATGTTAAATGTCGATTTATGCTACTTTAATCTCTGACAAAACCAAAATGAAACCTTATAAGG GGAGTTGGTCAAACTACCCCTTTTTCATCAAGAAATGGGTACAGAACTACAAATGGTGAAGATGAATCCTGTAATCTACATTAGTGACTACAGCCAGT ATATTTCAATAATTCCATACAGTAACAAAATTAATTTGCAATTTATGTATCCTATTTTAAATTTGCATATAAAAGCAATATATAATTGCCAATATTGA GAATAATTTGTCACCTTAAGATTGTGAAGAACCAATTTAAAATAAAAAGATTAGCAGAAAAAATAAATTTATAAAATAAATCTATGAAAATAACAAAGTC TAAATGATTCAAATGATAGAGTGGCACTATGACACTCTATATGTAAGAGATTAATATTACTAATATCAATCTATTTTCAATATGTTGAATTT CTTCATTTTCTTTTAAATTTCAAAGCTAACTTTAATCTCCAAAACATGTCAATAGTAATGCTTTTAAAGACATAGCAATTCAGTTACTGACAAT TCTGAATTTATGATTTTCCAAAACATGGGTAAAGATTAGAAATGTGTGTTGCAATGACAGCTTACATTCGAAATTTCTGAGCTTTAGGTTCAAT GGCATCAAAAGTTCTTTTACTCTAGGAATGCTGCACTAAACACAGCATTCATGGCTAAACAGGCCAATTTACTTTCTACAGCAGGGTAAGTGCAC GCCAGTGTACAGACTTTTCATAGAAAAGCAATTTGCTGGCCCCACTGAAGACTTCTTTACATGCCAGGGGAAAAATATCACACGTAGCCCTCCAGGCTGGG GACACATGCCGCTTATGTGCAAGGG	<i>WXRE ID: L (SEQ ID NO: 58)</i> CCACACTCATGTTGACATTAAAGCCATCGACAATCTCAGTAAGTACTAGTAACAATAACAATAAGACTGATCCATCACACAACATTACCCCTGGCT GTGTCCTTTGGAGTAAAAATCATGTAGATCAAGGTATGGTATGCTTGAACACCAAAAAGTAACCAAGTAGAGTAGAGTAGATCCAGTGAGTGCCTTA TGCGTGAGCCCACTTCCCTTTTGCCTTGTCTTACTTAATGTCTGGCAGAAATTCAGGCATGTAGGTGAGGGCCACCTTGACGAGTCCGTTCTCT CTTTCACCAACTGGATCCAGGGACAGGACACAGGTCTTGGGCTTGGCAGCGGGTCCCTTACCTACTGAGCCATTTCAACACTGACTTGGTTTAC TGAAAGCTAACTCTGAAGACTGGAATTCGATACTTTTTAGGGTGATGAGTCACCTGCTGTACAGCCTCAGCACTATGCTGAACTACATTACCCCTCA CAAAACGAGCAGCCGAGACTCACTGCTTACATGTAATCGAGGCCATGCTATGTTAGTAAACATGTGTGAGACTTACCAAAACTGTGTTTAAAGTT ACTTGCAACCTTCTGTAAACGCAAACTGCTGTGATTTTAACTATGTCTCACAATCAACAAGACATCTGTTCCGGGTAATTCACATTTTC TAAATAAGGCTTCAAAGTGGGCCAGGTCTCTTGGAGCTGAAATGTTCTGTTGAAGGGGGCAAAGTTATTTTCTTAACATCATGAGGAACTGGGTC AGGGTGTGGGGACTGCACCTGCTGAGGGATGGTATAGGAATGACCCACCTTTGGCGTGTCTTCTTGTCTTGTCTTGTGATGTTTGCATTT CTGTTTGCAATGCAAGTGAGCTCATTTGCTGTGGAAGCCCAAGCTGATGTCACTCTCTATCTTATTCACTGAACCAAGTCTGCTCCACGAACCCAGAG
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CTCTCAGCTAACACTAGCCTAGCTAGCCAGCTGCCCTTGGGATCCTTTCTCTCAGCCTTCCAAGTGGTGAATGGCAGGTACACTACTAAGCCCCGTAGGC
CTTTGTGTGGTCTGCAGATCCAACTTC

Human CMV promoter (SEQ ID NO: 59)

GTTGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCCATATATGAGTTCCGC
 GTTACATAAATTACGGTAAATGGCCCGCTGGCTGACCGCCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATG
 TTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTACGGTAAACTGCCACTTGGCAGT
 ACATCAAAGTGATCATATGCCAAGTACGCCCTATTGACGTCAATGACGGTAAATGGCCCGCTGGCAATTAATGCCAG
 TACATGACCTTATGGGACTTTCTACTTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTG
 GCAGTACATCAATGGGCGTGATAGCGGTTTGACTCACGGGGAATTTCCAAAGTCTCCACCCCATTTGACGTCAATGGGAGT
 TTGTTTTGGCACCAAAATCAACGGGACTTTCCAAATGTCTGTAACAATCCCGCCCATTTGACGCAAAATGGGCGGTAGGC
 GTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAGACGCCCATCCACGCTGTTT
 TGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGGACTCTA

Human EF-1 α gene intron 1 (SEQ ID NO: 34)

GTAAGTGCCGTGTGGTTCCCGCGGGCTGGCCCTTTACGGGTTATGGCCCTTGGCTGCCTTGAAATTACTTCCACGCC
 CCTGGCTGCAGTACGTGATTCTTTGATCCCGAGCTTCGGGTTGGAAAGTGGTGGGAGAGTTTCGAGGCCCTTGCCTTAAAG
 AGCCCTTCGCCCTCGTGTGATTGAGTTAGGCCCTGGCTTGGGCGTGGGCGCCCGCGTGCGAATCTGGTGGCACCTTCGC
 GCCTGTCTCGCTTTCGATAAGTCTCTAGCCATTAAATTTTGTGATGACCTGCTGCGACGCTTTTTTCTGGCAAGAT
 AGTCTTGTAATGCGGGCCAAGATCTGCACACTGGTATTTTCGGTTTTTGGGCGCGGGCGGCGACGGGCGCCGTGCGT
 CCCAGCGCACATGTTCCGGCAGGCGGGCTGCGAGCGCGGCCACCGAATCGGACGGGGGTAGTCTCAAGCTGGCC
 GGCTTCTCTGGTGCCCTGGCTCGCGCCGCTGTATCGCCCGCCCTGGCGGCAAGGCTGGCCCGGTGCGCACCAAGT
 TGCGTGAGCGGAAAGATGGCCGCTTCCCGGCCCTGCTGCAGGGAGCTCAAAATGGAGGACGCGCGCTCGGGAGAGC
 GGGCGGTGAGTCAACCCACACAAAGGAAAGGGCCCTTCCGTCTCAGCCGCTCCTCATGTGACTCCACGGAGTACC
 GGGCGCGCTCCAGGCACCTCGATTAGTTCTCGAGCTTTTGGAGTACGTCTGCTTTAGTTGGGGGAGGGGTTTTATGC
 GATGGAGTTTCCCCACACTGAGTGGGTGGAGACTGAAGTTAGGCCAGCTTGGCACTTGATGTAATTCCTCTTGGAAATT
 GCCCTTTTGAGTTGGATCTTGGTTCAATCTCAAGCCTCAGACAGTGGTTCAAGTTTTTTTCTTCCATTTCAG

FIG. 8

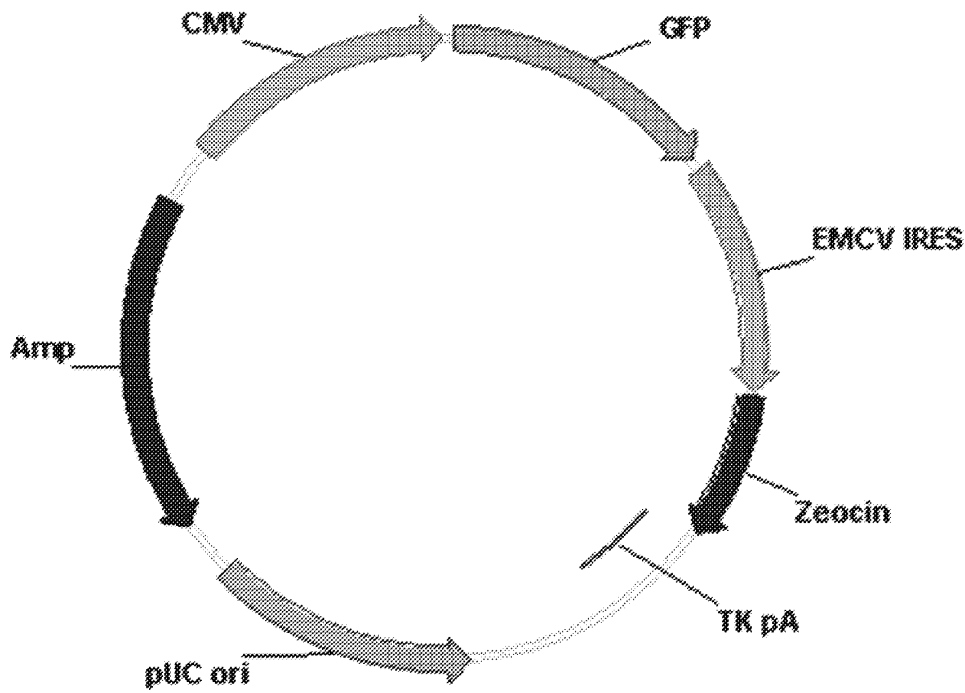


Fig. 9

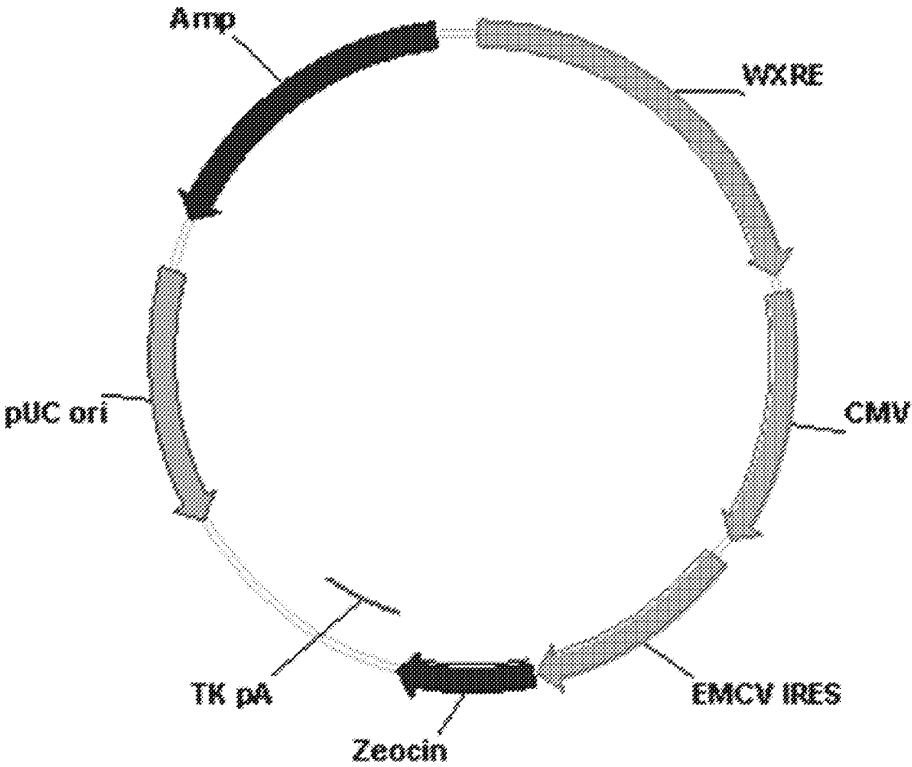


Fig. 10

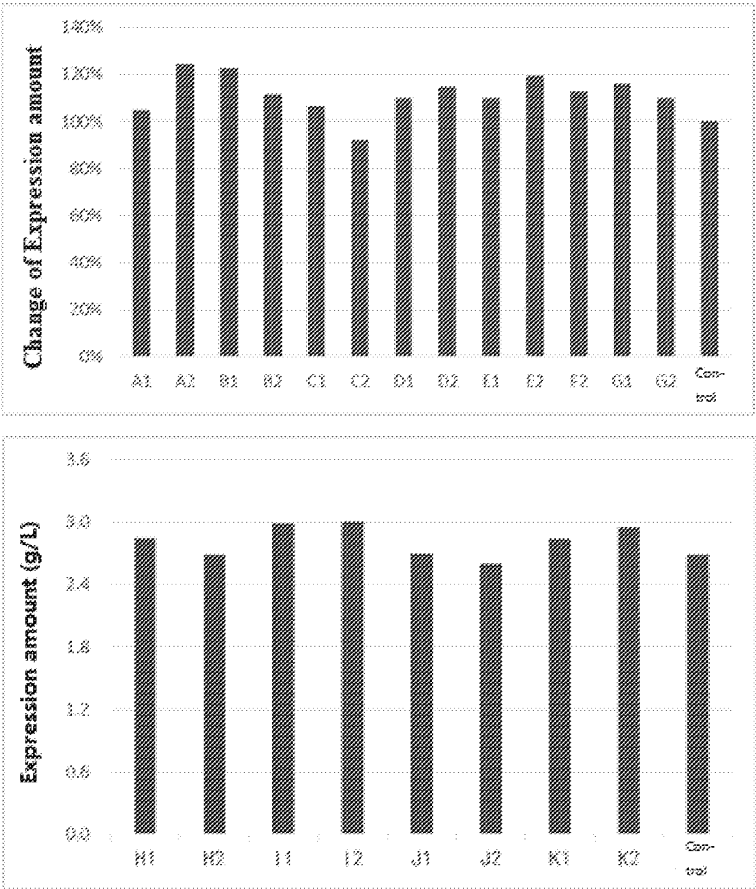


Fig. 11

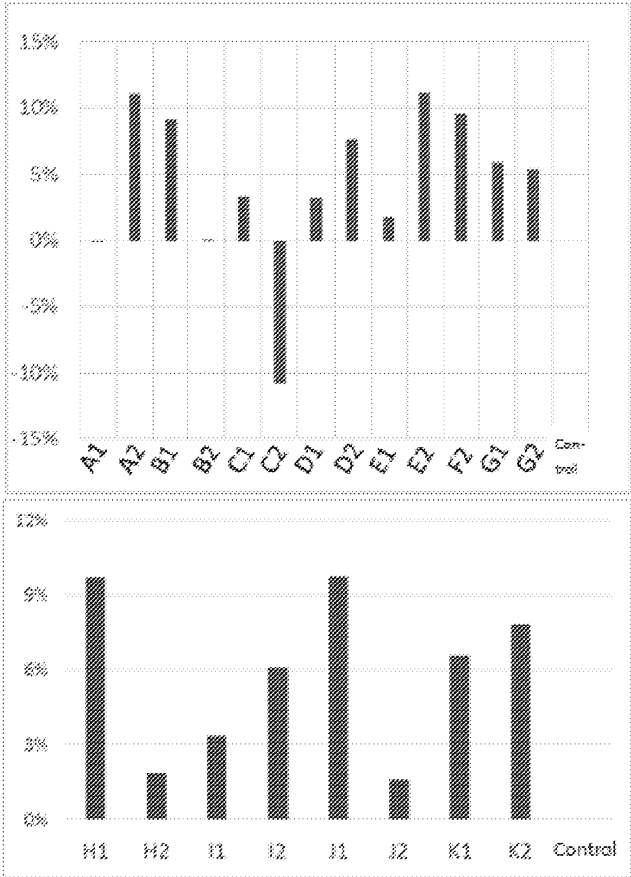


Fig. 12

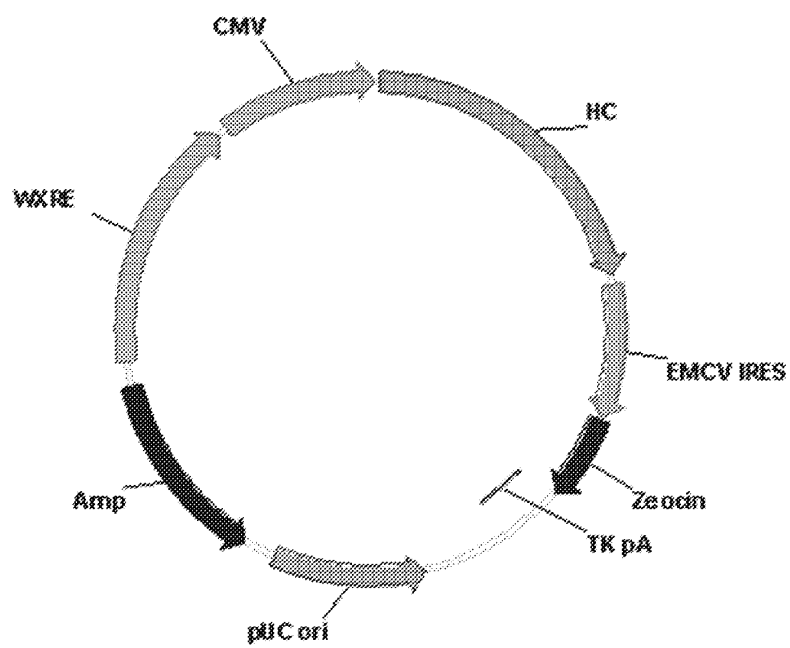


Fig. 13

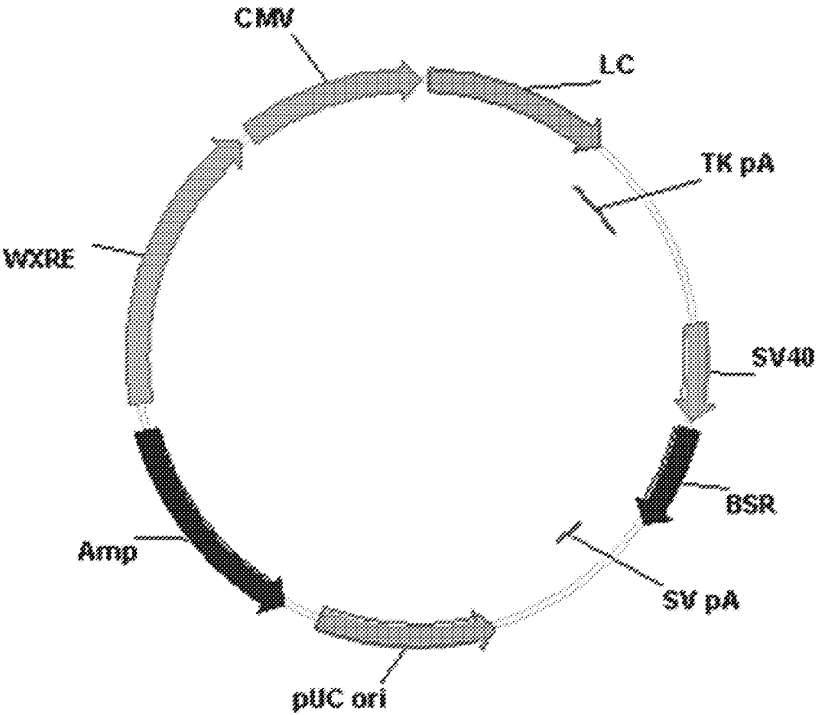


Fig. 14

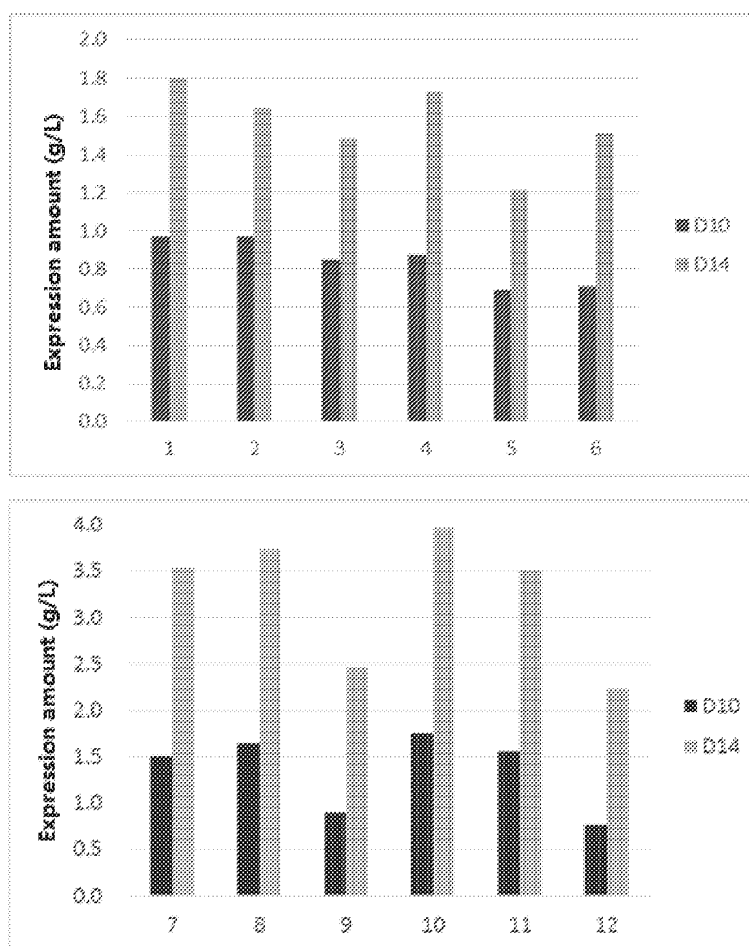


Fig. 15

(1) Amino acid sequence of the A chain of PD-L1 (SEQ ID NO: 71)

FTVTVPKDL YVVEYGSNMTECKFPVEKQLDLAALIVYWEMEDKNIIQFVHGEECLKVQHSSYRQARLLKDQLSLGNAAL
 QITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKINQRILVVDPV/TSEHELTCQAEGYPKAEVIW/TSSDHQVLSGKTTT
 TNSKREEKLFNV/TSLRJNTTNEJFYCTFRRLLDPEENHTAELVPELPLAHPPNERTPRDCGCKPCICTVPEVSSVFIFPPKPKD
 VLTITLTPKVTCVVVDISKDDPEVQFSWFVDDVEVHTAQTQPREEQFNSTFRSVSELPMHQDWLNGKEFKCRVNSAAPPAPI
 EKTISKTKGRPKAPQVY YTI PPPKEQMAKDKVSLT CMITDFPEDITVEWQWNGQPAENYKNTQPIIMDTDGSYFVYSKLVNQK
 SNWEAGNTFTCSVLHEGLHNHHTKSLSHSPGK

(2) Amino acid sequence of the heavy chain (HC) of Adalimumab (SEQ ID NO: 72)

EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQAPGKGLEWVSAITWNSGHIDYADSVEGRFTISRDN AKNSLYL
 QMNSLRAEDTAVYYCAKVSYLSTASSLDYWQQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSW
 NSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELGGPSVF
 LPPPKPKDTLMISRTPETVTCVVVDVSHEDPEVKFNWYVDGVEVHNATKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKC
 KVSNAKALPAPIEKTIISKAKGQPREPQVYVTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSF
 FLYSKLTVDKSRWQQGNVVFSCSVMEALHNHYTQKSLSPGK

(3) Amino acid sequence of the light chain (LC) of Adalimumab (SEQ ID NO: 73)

DIQMTQSPSSLSASVGDRVTITCRASQGIRNYLA WYQQKPGKAPKLLIYAASLTQSGVPSRFSGSGTDFLTITSSLPEDVA
 TYTCQRYNRAPYTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTE
 QDSKDYSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

Fig. 16