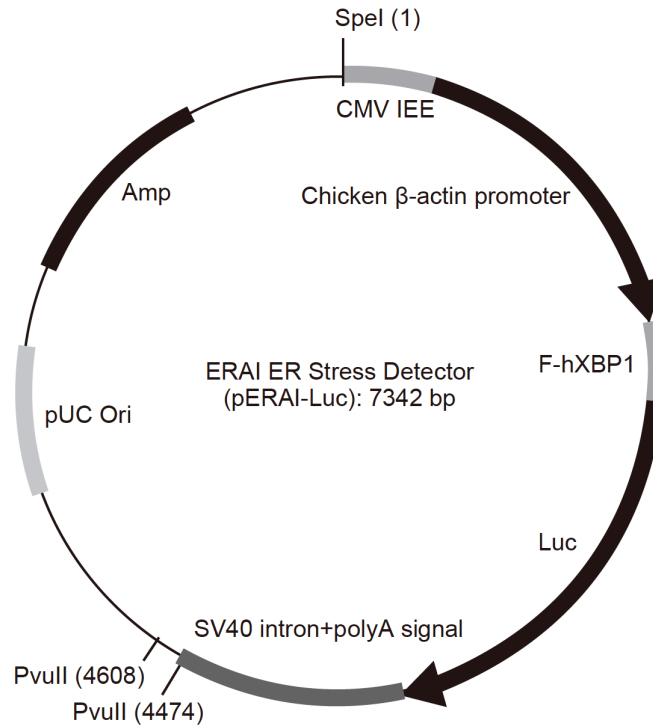


ERAI ER Stress Detector

(pERAI-Luc, Pro. No. StDtc-1)

Plasmid Information



CMV IEE + chicken β -actin promoter: 1-1715 bp.

h(human)XBP1: 1763-1986 bp.

hXBP1 intron: 1883-1908 bp.

Luc (luciferase): 1993-3642 bp.

SV40 intron and polyA signal: 3674-4107 bp.

SEQUENCE:

actagtattaatagtaataacacggggtcattagttcatagcccatataggagtccgcgttacataacttacggtaaatggcc
cgctggctgaccgccaacgacccccgccattgacgtcaataatgacgtatgtcccatagtaacccaatagggactttcc
attgacgtcaatgggtggactatttacggtaaaactgccacttggcagttacatcaagtgtatcatatgccaaagtacgccccatt
gacgtcaatgacggtaaatggcccgctggcattatgccagttacatgacctatgggactttcctacttggcagttacatctacg
tattagtcacgtctattaccatgggtcggaggtgagccccacgttctgcttactctccccatctccccccctccccacccccat
ttgtattttatttttttaattttttgtgcagcgatggggggcggggggggggggggggcgcgcgccaggcggggcggggcgg
ggcgagggggcggggcggggcggagggcggagaggtgcggcggcagccaatcagagcggcgcgtccgaaagtctctttt
atggcgagggcggggcggggcggggcggccctataaaaaagcgaagcgcgcggcggggcgggagtcgctgcgttgccttgc
cgtgccccgctccgcgccgctcgcgccgccccgccccggtctgactgaccgcgttactcccacaggtgagcggggcggga
cggcccttctctccgggctgtaattagcgttggtttaatgacggctcgtttctttctgtggtgcgtgaaagcctaaagggt
ccgggagggccctttgtgcgggggggagcggctcgggggggtgcgtgcgtgtgtgtgcgtggggagcggcgcgtgcgg
cccgcgtgccccggggctgtgagcgtgcggggcggcggcggggcctttgtgcgtccgcgtgtgcgcgaggggagcgc
ggccggggggcgggtgccccgcgggtgcgggggggctgcgaggggaacaaaggtgcgtgcggggtgtgtgcgtgggggg
gtgagcagggggtgtgggcgcggcgggtcgggctgtaacccccctgcacccccctccccagttgctgagcacggcccc
gcttcgggtgcggggctccgtgcggggcgtggcgcggggctgcgctgccccgggggggggtggcggcaggtgggggtg
ccgggcggggcggggccgcctcgggcccggggagggctcgggggagggggcgcggcggccccggagcggcggcggct
gtcagggcgcggcgagccgcagccattgcctttatggtaatcgtgcgagagggcgcagggacttctttgtccaaatctgg
cggagccgaaatctgggagggcggcggcggcggcccccttagcggggcggggcgaagcgggtgcggcggcggcaggaagg
aaatgggcggggagggccttctgtgcgtcggcggcggcggcggcggcggcggcggcggcggcggcggcggcggcggcggc
acggctgccttcgggggggacggggcagggcgggggtcggcttctggcgtgtgaccggcggctctagacctctgtaacca
tgttcatgccttcttttctctacagctcctgggcaacgtgctggttattgtgcttctcatcattttggcaaagaattatcaagctt
ctaggtaccTCTAGACCACCATGGACTACAAGGACGACGATGACAAGGGCCTTG
TAGTTGAGAACCAGGAGTTAAGACAGCGCTTGGGGATGGATGCCCTGGTTG
CTGAAGAGGAGGCGGAAGCCAAGGGGAATGAAGTGAGGCCAGTGCCGGG
TCTGCTGAGTCCGCAGCACTCAGACTACGTGCACCTCTGCAGCAGGTGCAG
GCCCAGTTGTCACCCCTCAGAACATCTCCCATGGATTCTGGCGGTATTGA
CTCTTCAGATTCAAGATCTGAAGACGCCAAAAACATAAAGAAAGGCCCG
GCGCCATTCTATCCGCTGGAAGATGGAACCGCTGGAGAGCAACTGCAT
AAGGCTATGAAGAGATACGCCCTGGTTCCTGGAACAATTGCTTTTACAG
ATGCACATATCGAGGTGGACATCACTTACGCTGAGTACTTCGAAATGTC
CGTTCGGTTGGCAGAAGCTATGAAACGATATGGGCTGAATACAAATCA
CAGAATCGTCGTATGCAGTGAAACTCTCTTCAATTCTTTATGCCGGTG

TTGGGCGCGTTATTTATCGGAGTTGCAGTTGCGCCCGCGAACGACATTT
ATAATGAACGTGAATTGCTCAACAGTATGGGCATTTTCGCAGCCTACCGT
GGTGTTCGTTTCCAAAAAGGGGTTGCAAAAAATTTTGAACGTGCAAAAA
AAGCTCCCAATCATCCAAAAAATTATTATCATGGATTCTAAAACGGATT
ACCAGGGATTTTCAGTCGATGTACACGTTTCGTCACATCTCATCTACCTCC
CGGTTTTAATGAATACGATTTTGTGCCAGAGTCCTTCGATAGGGACAAG
ACAATTGCACTGATCATGAACTCCTCTGGATCTACTGGTCTGCCTAAAG
GTGTCGCTCTGCCTCATAGAACTGCCTGCGTGAGATTCTCGCATGCCAG
AGATCCTATTTTTGGCAATCAAATCATTCCGGATACTGCGATTTTAAAGT
GTTGTTCCATTCCATCACGGTTTTGGAATGTTTACTACACTCGGATATT
TGATATGTGGATTTTCGAGTCGTCTTAATGTATAGATTTGAAGAAGAGCT
GTTTCTGAGGAGCCTTCAGGATTACAAGATTCAAAGTGCGCTGCTGGT
GCCAACCTATTCTCCTTCTTCGCCAAAAGCACTCTGATTGACAAATAC
GATTTATCTAATTTACACGAAATTGCTTCTGGTGGCGCTCCCCTCTCTA
AGGAAGTCGGGGAAGCGGTTGCCAAGAGGTTCCATCTGCCAGGTATCA
GGCAAGGATATGGGCTCACTGAGACTACATCAGCTATTCTGATTACACC
CGAGGGGGATGATAAACCGGGCGCGGTTCGGTAAAGTTGTTCCATTTTT
TGAAGCGAAGGTTGTGGATCTGGATACCGGGAAAACGCTGGGCGTTAA
TCAAAGAGGCGAACTGTGTGTGAGAGGTCCTATGATTATGTCCGGTTAT
GTAAACAATCCGGAAGCGACCAACGCCTTGATTGACAAGGATGGATGG
CTACATTCTGGAGACATAGCTTACTGGGACGAAGACGAACACTTCTTCA
TCGTTGACCGCCTGAAGTCTCTGATTAAGTACAAAGGCTATCAGGTGGC
TCCCGCTGAATTGGAATCCATCTTGCTCCAACACCCCAACATCTTCGAC
GCAGGTGTCGCAGGTCTTCCCGACGATGACGCCGGTGAACCTTCCCGCC
GCCGTTGTTGTTTTGGAGCACGGAAAGACGATGACGGAAAAAGAGATC
GTGGATTACGTCGCCAGTCAAGTAACAACCGCGAAAAAGTTGCGCGGA
GGAGTTGTGTTTGTGGACGAAGTACCGAAAGGTCTTACCGGAAAACCTC
GACGCAAGAAAAATCAGAGAGATCCTCATAAAGGCCAAGAAGGGCGGA
AAGATCGCCGTGTAAggatcctggccagctagctagtagtagaggatcttgaaggaaccttacttctgt
ggtgtgacataattggacaaactacctacagagattaaagctctaaggtaaataaaatTTTTAAGTGTATAATGTGTTAACTAC
tgattctaattgttgtgattttagattccaacctatggaactgatgaatgggagcagtggtggaatgccttfaatgaggaaaacct
gttttgctcagaagaatgccatctagtgatgatgaggctactgctgactcacaattctactcctcaaaaaagaagagaag
gtagaagacccaaggacttcttcagaattgctaagTTTTTgagtcagctgtgtagtaataagaactcttgcttcttctatt

acaccacaaaaggaaaaagctgcactgctatacaagaaaattatggaaaaatattgatgtatagtgccttgactagagatcataa
tcagccataccacattgtagaggtttacttgcttfaaaaaacctcccacacctccccctgaacctgaaacataaaatgaatgca
attgttggttaactgtttattgcagcttataatggftacaaataaagcaatagcatcacaatttcacaaataaagcattttttcac
tgcattctagtgtggtttgtccaaactcatcaatgtatcttatcatgtctggatcagcttcagaagatgggagggcctccaaca
cagtaatttctcccactcttaaaatagaaaatgtcaagtcagttaaggaggaagtggactaactgacgcagctggccgtgc
gacatcctctttaattagtgtaggcaacgccctccagagggcgtggtgtttgcaagaggaagcaaaagcctctccacca
ggcctagaatgtttccaccaatcattactatgacaacagctgttttttagtattaagcagagggccggggaccctgggcccg
cttactctggagaaaaagaagagaggcattgtagaggctccagaggcaactgtcaaacaggactgcttctatttctgcaca
ctgtctggccctgtcacaaggtccagcacctccatacccccttaataagcagttgggaacgggtgctgggtcttactccgcc
atcccgccctaactccgccagttccgccatttctccgccccatggctgactaattttttattatgcagagggccgagggccg
ctcggcctctgagctattccagaagtagtgaggaggctttttggaggctgcattaatgaatcgccaacgcgcggggagagg
cgtttgctgattgggcctctccgcttctcgtcactgactcgtcgcctcggctgctcggctgaggcagcggtatcagct
cactcaaaggcggtaatacggttatccacagaatcaggggataaacgcaggaaagaacatgtgagcaaaaggccagcaaaa
ggccaggaaccgtaaaaaggccgcgttgctggcgttttccataggctccgccccctgacgagcatcacaaaaatcgacgc
tcaagtcagaggtggcgaaccgacaggactataaagataaccaggcgtttccccctggaagctccctcgtgcctctcctgt
tccgacctgccgttaccggatactgtccgccttctccctcgggaagcgtggcgttttcaatgctcacgctgtaggtatc
tcagttcgggtgtaggtcgtcgtccaagctgggctgtgtgcacgaacccccgttcagcccagccgtgcgccttatccggta
actatcgtcttgagccaaccggtaagacagacttatgccactggcagcagccactgtaacaggattagcagagcgag
gtatgtaggcgggtctacagagttctgaagtgggtgcctaactacggctacactagaagaacagtaatttggtatctgcgctctg
ctgaagccagttaccttcggaaaaagagttgtagctcttgatccggcaacaaaccaccgctggtagcgggtgtttttgtttg
caagcagcagattacgcgcagaaaaaaggatctcaagaagatcctttgatctttctacggggtctgacgctcagtggaacg
aaaactcacgtaagggttttggtcatgagattatcaaaaaggatcttcacctagatccttttaataaaaaatgaagtttaaatca
atctaaagtatatatgagtaaaactggctgtgacagttaccaatgcttaatcagtgaggcacctatctcagcgatctgtctattcgtc
atccatagttgcctgactccccgctgtgtagataactacgatacgggagggcttaccatctggccccagtgctgcaatgatacc
gcgagaccacgctcaccggctccagatttatcagcaataaaccagccagccggaaggccgagcgcagaagtggctctg
caactttatccgcctccatccagtctattaattgttgcgggaagctagagtaagtagttccagtaaatagttgcaacggtg
ttgccattgctacaggcatcgtgggtgcacgctcgtcgtttggatggcttcattcagctccgggtcccaacgatcaaggcgagtt
acatgatccccatgttgcaaaaaagcggtagctccttcggctcctccgatcgtgtcagaagtaagttggccgcagtggtatc
actcatggttatggcagcactgcataattcttactgcatgccatccgtaagatgctttctgtgactggtgagtactcaaccaag
tcattctgagaatagtgatcggcgaccgagttgctcttggccggcgtcaatacgggataataccgcgccacatagcagaact
ttaaagtgtcatcattgaaaaacgttctcggggcgaaaactctcaaggatcttaccgctgttgatccagttcagatgtaacc
cactcgtgcaccaactgatcttcagcatctttacttccaccagcgttctgggtgagcaaaaacaggaaggcaaaatgccgca
aaaaagggaataaggcgacacggaaatgtgaatactcactcttctttcaatattattgaagcatttatcagggtattgtc

tcatgagcggatacatatttgaatgtatttagaaaaataacaaataggggtccgcgcacatttccccgaaaagtgccacctga
cgtctaagaaaccattattatcatgacattaacctataaaaaataggcgtatcacgaggcccttctcgcgcggttcggtgatga
cggatgaaaacctctgacacatgcagctccggagacggtcacagcttctgtaagcggatgccgggagcagacaagccccg
tcagggcgcgtcagcgggtgttggcgggtgcggggctggcctaactatcggcatcagagcagattgtactgagagtgcac
catatgcggtgtgaaataccgcacagatgcgtaaggagaaaataccgcatcaggcgccattcgccattcaggctgcgcaact
gttgggaagggcgatcgggtcggggcctcttcgctattacgccagcgcgttgacattgattattg//

The start codon of ATG is indicated by double underline.

Blue color sequences are for DYKDDDDK tag.

Red color sequences are from human XBP1 gene.

Underlined sequences are the intron of XBP1.

Bold sequences are from luciferase gene of pGL3 (promega).

Orange color sequences are SV40 intron and polyA signal.