

图 1

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPCCQAPTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVAVLEHQVE
VEETVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNYSLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAESP PARLDIQLPIISDDFKFQV
WRKMFRALMPALEELTFDPSSAHPSLVVSSSGRRVECSEQKAPPAGEDPRQFDKAVAV
VAHQQLSEGEHYWEVDVGDKPRWALGVIAAEAPRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRSPERRPTRIGLYLSFGDGVLSFYDASDADALVPLFAFHERLPRPVY
PFFDVCWHDKGKNAQPLLLVGPEGAEA (SEQ ID NO: 1)

ATGTCGGCTGCGCCCGGCTCCTGCACCAGGAGCTGTCTGCCCCTGTGCCTGCAGCTGTTTCGACGCGC
CCGTGACAGCCGAGTGCGGCCACAGTTTCTGCCGCGCTGCCTAGGCCGCGTGCCCGGGGAGCCGGCGGC
GGATGGCACC GTTCTCTGCCCCTGCTGCCAGGCCCCACGCGCCG CAGGCACTCAGCACCAACCTGCAG
CTGGCGCGCTTGGTGGAGGGGCTGGCCAGGTGCCG CAGGGCCACTGCGAGGAGCACCTGGACCCGCTGA
GCATCTACTGCGAGCAGGACCGCGCGCTGGTGTGCGGAGTGTGCGCCTCACTCGGCTCGCACCGCGGTCA
TCGCCTCCTGCCTGCCGCCGAGGCCACGCACGCCTCAAGACACAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGCATGCCAAGGAGAAGAGTGTGGCTGTGCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
CAGTGCCTCAGTTCCGGGGGGCCGTGGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGCGAGGCAGAGCGTGTACGGGGTGAGGCAGGGGTGCGCTTGCGCCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGCTGCGGCAGATGGAGAAGGTCCTGGAGGAGGTGGCGGACAAGCCGC
AGACTGAGTTCTCATGAAATACTGCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGTCTCCCC
ACCCGCGCGTCTGGACATCCAGCTGCCAATTATCTCAGATGACTTCAAATTCCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGCGCTGGAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCGAGCCTGGTGG
TGCTTCTCTGCGCCCGCGCTGGAGTGTCTCGGAGCAGAAGGCGCCGCCGGCGGGGAGACCCGCGCCA
GTTTCGACAAGGCGGTGGCGGTGGTGGCGCACCAGCAGCTCTCCGAGGGCGAGCACTACTGGGAGGTGGAT
GTTGGCGACAAGCCGCGCTGGGCGCTGGGCGTGATCGCGGCCGAGGCCCGCCGCCGGGCGCCTGCACG
CGGTGCCCTCGCAGGGCCTGTGGCTGCTGGGGCTGCGCGAGGGCAAGATCCTGGAGGCACACGTGGAGGC
CAAGGAGCCGCGCGCTCTGCGCAGCCCCGAGAGGCGGCCCACGCGCATTGGCCTTTACCTGAGCTTCGGC
GACGGCGTCTCTCTCTTCTACGATGCCAGCGACGCCGACGCGCTCGTGCCGCTTTTTGCCTTCCACGAGC
GCCTGCCCAGGCCCTGTACCCCTTCTTCGACGTGTGCTGGCACGACAAGGGCAAGAAATGCCCAGCCGCT
GCTGCTCGTGGGTCCCGAAGGCGCCGAGGCCTGA (SEQ ID No: 19)

图 2

MSAAPGLLRQELSCPLCLQLFDAPVTAECGHSFCRACLIRVAGE
 PAADGTVACPCCQAPTRPQALSTNLQLSRLVEGLAQVPQGHCEEHLDPISIYCEQDRT
 LVCVGCASLGSHRGHRLLPAAEAQARLKTQLPQQKMLQEACMRKEKTVAVLEHQLE
 VEETVRQFRGAVGEQLGKMRMFLAALESSLDREAERVGRDAGVALRRELSSLNSYLEQ
 LRQMEKVL EEVADKPQTEFLMKFCLVTSRLQKILSESPPPARLDIQLPVISDDFKFQV
 WKKMFRALMPALEELTFDPSSAHPSLVSSSGRRVECDQKAPPAGEDTRQFDKAVAV
 VAQQLLSQGEHYWEVEVGDKPRWALGVMAADASRRGRHLHAVPSQGLWLLGLRDGKILE
 AHVEAKEPRALRTPERPPARIGLYLSFADGVLAFYDASNPDVLTPIFSFHERLPGPVY
 PIFDVCWHDKGKNAQPLLLVGPEQEQA (SEQ ID NO: 2)

ATGTGCGCTGCACCCGGCCTTCTGCGTCAGGAACTGTCCTGCCACTGTGCTTGCAGCTGTTTCGATGCGC
 CAGTGACGGCTGAGTGTGGCCACAGTTTCTGCCGTGCCTGCCTGATCCGGGTGGCAGGGGAGCCTGCTGC
 GGACGGCACAGTTGCCTGTCCCTGTTGTGTCAGGCACCTACACGGCCGAGGCTCTAAGCACTAACCTCCAG
 TTGTGTCAGCCTTGTGGAGGGTTTGGCGCAAGTGCCCCAAGGCCACTGCGAGGAACACCTGGATCCACTGA
 GCATCTACTGCGAGCAGGACCGCACACTTGTGTGTGGTGTGTGTGCCTCGCTCGGTTCTACCGTGGTCA
 TCGTCTCCTGCCGTGCCGTGAAGCCCAAGCACGCCTCAAGACACAGCTTCCACAGCAGAAGATGCAGCTG
 CAGGAGGCATGCATGCGCAAGGAGAAGACTGTAGCGGTGCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
 CAGTGCGCCAGTTCCGGGGAGCTGTGCGGGAGCAGCTGGGGAAGATGCGGATGTTCTGGCTGCCCTAGA
 AAGTTCTCTGGACCGTGAAGCAGAAAGGGTTCCGGGTGATGCTGGGGTTGCCTTGCCTCGGGAGCTGTCA
 AGCCTGAACTCTTACCTAGAGCAACTGAGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCTGACAAGCCAC
 AGACAGAATTCTCATGAAATTCTGCCCTGGTAACCAGCAGGCTGCAGAAGATCCTGTCAGAGTCACCACC
 ACCGGCAAGGCTAGATATCCAGCTGCCGTGCATCTCAGATGACTTCAAATTCCAGGTGTGGAAGAAGATG
 TTCCGGGCTCTGATGCCAGCGCTGGAGGAACTGACTTTTGACCCAGCTCTGCGCACCCGAGCCTGGTGG
 TGTCTCTCTGCTGCGCGAGTGGAGTGTCTCAGACCAGAAGGCGCCGCGAGCGGGAGAAGACACGCGTCA
 GTTCGACAAGGCAGTAGCGGTGGTGGCGCAGCAGCTGCTGTACAGGGCGAGCACTATTGGGAGGTGGAG
 GTGGGCGACAAACCACGCTGGGCCCTGGGAGTGATGGCGGCTGACGCTTCCCGCCGTGGCCGGCTGCACG
 CGGTGCCCTCACAGGGGCTGTGGCTGCTGGGTCTGCGCGATGGCAAGATCCTGGAGGCGCACGTGGAGGC
 CAAGGAGCCGCGGGCACTGCGCACCCAGAGAGGCCTCCGGCGCGCATTGGCCTCTACCTAAGCTTCGCA
 GATGGCGTCTGGCTTCTATGATGCGAGCAACCCCGACGTACTTACGCCAATCTTTTCTTTCCACGAGC
 GTCTGCCCCGGCCGTGTACCCCATCTTTGACGTGTGCTGGCACGACAAGGGCAAGAAATGCCCCAGCCCC
 TCTGCTTGTGGGGCCGGAGCAGGAACAGGCCTGA (SEQ ID NO: 20)

图 3

MSTAPGLLRQELSCPLCLQLFDAPVTAECGHSFCRACLIRVAGE
 PADDGTVACPPCQASTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRT
 LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKAQLQEACMRKEKSVAVLEHQLV
 VEETVRQFRGAVGEQLGKMRMFLAALESSLDREAERVGEAGVALRRELSSLNSYLEQ
 LRQMEKVL EEVADKPQTEFLMKFCLVTSRLQKILSESPPPARLDIQLPVISDDFKFQV
 WKKMFRALMPELEELTFDPSSAHPSLVVSASGRRVECSEQKAPPAGEDTCQFDKTVAV
 VAKQLLSQGEHYWEVEVGDKPRWALGVMAADASRRGR LHAVPSQGLWLLGLRDGKILE
 AHVEAKEPRALRTPERPPARIGLYLSFADGVLT FYDASNTDALTPLFSFHERLPGPVY
 PMFDVCWHDKGKNSQPLLLVGPDPSEQA (SEQ ID NO: 3)

ATGTGCGACTGCACCAGGCCCTTTTGCGCCAGGAACTGTCTTGCCCGCTGTGCTTGCAGCTGTTTCGATGCAC
 CAGTGACCGCTGAGTGTGGCCACAGTTTCTGCCGTGCCTGCCTGATCCGTGTGGCAGGGGAGCCTGCCGA
 CGATGGCACGGTTGCCTGTCCCTGTTGTGTCAGGCATCTACTCGGCCACAGGCGCTAAGCACTAACCTCCAG
 TTGGCACGCCCTTGTGGAGGGTTTGGCACAAGTGCCCCAAGGCCACTGCGAGGAACACCTGGATCCACTGA
 GCATCTACTGCGAGCAGGACCGCACACTTGTGTGTGGTGTGTGTGCCTCTCTCGGTTACACCGTGGTCA
 CCGTCTTCTGCCTGCCGCAGAAGCCCATGCACGTCTCAAGACACAGCTTCCACAACAGAAGCCCCAGCTG
 CAGGAGGCATGCATGCCAAGGAGAAGAGTGTAGCAGTCCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
 CCGTGCGTCAGTTCGGGGGAGCTGTTGGGGAGCAGCTGGGGAAGATGCGGATGTTCTGGCTGCCCTAGA
 AAGTTCTTTGGACCGTGAAGCAGAAAGGGTTTCGAGGTGAGGCAGGGGTTGCCTTGCGGCGGGAGCTGTCA
 AGCCTGAACTCTTACCTGGAGCAACTGAGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCTGACAAGCCAC
 AGACAGAATTCTCATGAAATTCTGCCTGGTGACCAGCAGGCTGCAGAAGATTCTGTCAGAGTCACCACC
 CCCAGCAAGGCTAGATATCCAGCTGCCTGTCATCTCAGATGACTTCAAATTCCAGGTGTGGAAGAAGATG
 TTCCGGGCTCTGATGCCAGAGTTGGAGGAACTGACTTTTGACCCAGCTCTGCGCACCCGAGCCTGGTGG
 TGTCCGCTCTGGTCGCCGAGTGGAGTGCTCGGAGCAGAAGGCGCCGCCAGCAGGAGAAGACACGTGCCA
 GTTCGACAAGACGGTAGCGGTAGTGGCGAAGCAGCTGCTGTACAGGGGGAGCACTACTGGGAGGTGGAG
 GTGGGCGACAAGCCACGCTGGGCCCTGGGTGTGATGGCGGCTGACGCTTCCCGTCGTGGCCGCTGCACG
 CGGTGCCCTCACAGGGGCTGTGGTTGCTCGGCCTGCGCGATGGCAAGATCCTGGAGGCACACGTGGAGGC
 CAAGGAGCCACGGGCACTGCGCACCCAGAGAGGCCACCAGCGCGCATTGGCCTCTACCTAAGCTTTGCA
 GATGGCGTCTGACTTTCTATGATGCAAGCAACACCGACGCGCTTACACCGCTCTTTTCTTTTCATGAGC
 GTCTGCCTGGGCCGTGTACCCCATGTTTGACGTGTGCTGGCACGACAAGGGCAAGAAATCTCAGCCGCT
 GTTGCTCGTGGGGCCAGACAGTGAGCAGGCCTGA (SEQ ID NO: 21)

图 4

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPCCQAPTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVAVLEHQLVE
VEETVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAESPPPARLDIQLPIISDDFKFQV
WRKMFRLMPALEELTFDPSSAHPSLVSSSGRRVECSEQKAPPAGEDPRQFDKAVAV
VAHQQLSEGEHYWEVEVGDKPRWALGVIAAEGPRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRSPERRPTRIGLYLSFGDGVLSFYDASDADALVPLFAFHERLPGPVY
PFFDVCWHDKGKNSQPLLLVGSEGA EA (SEQ ID NO: 4)

ATGTCGGCTGCGCCGGGCTCCTGCACCAGGAGCTGTCCTGCCCGCTGTGCCTGCAGCTGTTTCGACGCGC
CCGTGACAGCCGAGTGCGGCCACAGTTTCTGTCGCGCCTGCCTGGGCCGCGTGCGCCGGGAACCGGCGGC
GGATGGCACC GTTCTCTGCCCCTGCTGT CAGGCCCCACGCGGCCG CAGGCACTCAGCACCAACCTGCAG
CTGGCGCGCTGTTGGAGGGGCTGGCCAGGTGCCG CAGGGCCACTGCGAGGAGCACCTGGACCCGCTGA
GCATCTACTGTGAGCAGGACCGCGCGCTGGTGTGCGGAGTGTGCGCCTCACTCGGCTCGCACCGCGGTCA
TCGCCTGCTGCCC GCCCGGAGGCCCCACGCACGCCTCAAGACGCAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGCATGCGCAAGGAGAAGAGTGTAGCTGTGCTGGAGCATCAGTTGGTGGAGTGGAGGAGA
CAGTGCCTCAGTTCCGGGGGGCCGTGGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGTGAGGCAGAGCGTGTGCGGGGTGAGGCAGGGGTGCGCTTGCGCCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGCTGCGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCCGACAAGCCGC
AGACTGAGTTCCTAATGAAATACTGCCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGTCTCCCC
ACCCGCCC GTCTGGACATCCAGCTGCCAATCATCTCAGATGACTTCAAATTCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGCGCTGGAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCACCCAGCCTGGTGG
TGCTTCTCTCCGGCCGCCGCGTGGAGTGCTCGGAGCAGAAGGCGCCGCCGGCGGGGGAGGACCCGCGCCA
GTTGACAAGGCGGTAGCGGTGGTGGCGCACCCAGCAGCTCTCCGAGGGCGAACACTACTGGGAGGTGGAG
GTGGGCGACAAGCCGCGCTGGGCGCTGGGTGTGATCGCGGCCGAGGGGCCCCGTGCGGGGCGCCTGCACG
CGGTGCCCTCGCAGGGCCTGTGGCTGCTGGGGCTGCGTGAGGGCAAGATCCTGGAGGCTCACGTGGAGGC
CAAGGAGCCGCGCGCTCTGCGCAGCCCCGAGCGGCGGCCACGCGCATCGGCCTCTACCTGAGCTTCGGC
GACGGCGTCTCTCTTCTACGATGCCAGCGACGCCGACGCGCTCGTGCCGCTTTTTGCCTTCCACGAGC
GCCTGCCTGGGCCC GTTACCCCTTCTTCGACGTGTGCTGGCAGACAAGGGCAAGAACTCCAGCCGCT
GCTGCTCGTGGGGTCCGAAGGCGCCGAAGCCTGA (SEQ ID NO: 22)

图 5

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPSCQAPTRPQALSTNQQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRV
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVGVLEQQQLVE
VEETVRQFRGAVGEQLGKMRLFLAALEGSIDREAERVGEAGVALRRELGSLSKSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAESP PARLDIQLPVISDDFKFQV
WRKMFRLMPAMQELTFDPSTAHPSLVLSASGRRVECSEQKAPPAGEDPRQFDKAVAV
VTHQLLSEGEHYWEVEVGDKPRWALGVIGAQAGRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRTPERRPSRIGIYLSFADGVLSFYDASDADALELLFAFHERLPGPVY
PFFDVCWHDKGKNAQPLLLVGPDSGGEA (SEQ ID NO: 5)

ATGTCAGCTGCGCCCGGCTCCTGCACCAGGAGCTGTCCTGTCCGCTGTGCCTGCAGCTGTTTCGATGCGC
CGGTGACGGCTGAGTGCGGCCACAGCTTCTGCCGCGCCTGCCTGGGCCGCGTGGCAGGGGAGCCAGCCGC
GGATGGCACGGTGCTCTGCCCCAGCTGCCAGGCACCCACGCGGCCGAGGCGCTCAGCACCAACCAGCAG
CTGGCGCGCTGTTGGAGGGGCTGGCGCAGGTGCCGAGGGCCACTGCGAGGAGCACCTAGACCCGCTCA
GCATCTACTGCGAGCAGGACCGCGTGCTCGTGTGCGGCGTCTGCGCCTCGCTGGGTTCGCACCGCGGCCA
CCGCTGCTGCCCCGCCGCCGAAGCCCATGCGCGCCTTAAGACGCAGCTCCCGCAGCAGAAAGCTGCAGCTG
CAGGAGGCGTGATGCGGAAGGAGAAGAGCGTGGGTGTGCTGGAGCAACAAGTGGTGGAGTGGAGGAGA
CGGTGCGTCAGTTCCGGGGGGCAGTGGGGGAGCAGCTGGGCAAGATGCGGTTGTTCTGGCTGCACTGGA
GGGCTCCTTGGAACGAGAAGCAGAGCGTGTCGGGGTGAGGCGGGGGTGCCTTGCGGAGGGGAGCTGGGG
AGCCTGAAGTCTTACTTGGAGCAGCTGCGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCAGACAAGCCCC
AGACCGAGTTCCTCATGAAATACTGCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGTCGCCCCC
ACCTGCCCCGCTGGACATTCAGCTGCCTGTCATCTCAGACGACTTCAAATTCAGGTGTGGAGAAAGATG
TTCCGGGCCCTGATGCCAGCGATGCAGGAGCTGACCTTTGACCCAGCACGGCCACCCGAGCCTGGTGC
TGTCGGCCTCGGGCCGCCGCGTGAGTGCTCGGAGCAGAAGGCGCCGCCGGCCGAGAGGACCCGCGCCA
GTTGACAAGGCGGTGGCGGTGGTGACGCACCAGCTGCTGTGGAAGGCGAGCACTACTGGGAGGTGGAG
GTGGGCGACAAGCCACGCTGGGCGCTGGGCGTGATCGGGGCCAGGCCGGTCGCCGCGCGCGGCTGCACG
CCGTGCCCTCGCAGGGCCTCTGGCTGCTCGGGCTGCGCGAGGGCAAGATCCTGGAGGCTCACGTCGAGGC
CAAGGAGCCGCGCGCCCTGCGCACCCCGGAGAGGCGGCGTTCGCGCATCGGGATCTACCTGAGCTTCGCG
GATGGCGTCTCTCGTTCTACGACGCCAGCGACGCCGACGCGTGGAGCTGCTCTTCGCCTTCCACGAAC
GCCTGCCGGGGCCCGTGTAACCCCTTCTTCGACGTGTGCTGGCACACAAGGGCAAGAAGCTCAGCCGCT
CCTGCTGGTGGGGCCCGACAGCGGCGGGGAGGCCTGA (SEQ ID NO: 23)

图 6

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLSRVAGE
PAADGTVPCPCQALTRPQALSTNQQLARLVEGLAQVPQGHCEEHLDPISYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVALLEHQLME
VEEMVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAESP PARLDIQLPVISDDFKFQV
WRKMFRALMPVTKELTFDPSSAHPSLVLSPSGRRVECDQKAPPAGEDPCQFDKAVAV
VAQQVLS DGEHYWEVQVGEKPRWALGVIAAQASRRGR LHAVPSQGLWLLGLRDGKILE
AHVEAKEPRALRTPERRPTRIGIYLSFGDGVLSFYDASDPDALELLFAFHERLPGPVY
PFFDVCWHDKGKNAQPLLLVGPDGEEA (SEQ ID NO: 6)

ATGTCGGCCGCGCCGGGCTCCTGCACCAGGAGCTGTCCTGCCCGCTCTGCCTGCAGCTGTTTGACGCGC
CGGTGACCGCCGAGTGCGGCCACAGTTTCTGCCGCGCTGCTGAGCCGCGTGGCTGGGGAGCCGGCGGC
GGACGGCACCGTGCCCTGCCCCTGCTGCCAGGCACTCACGCGGCCACAGGCGCTCAGCACCAACCAGCAG
CTGGCGCGCTGTTGGAGGGGCTGGCGCAGGTGCCGAGGGCCACTGCGAGGAGCACCTAGACCCGCTCA
GCATCTACTGCGAGCAGGATCGAGCGCTCGTGTGCGGCGTGTGCGCCTCGCTCGGCTCGCACCGCGGCCA
CCGCTGCTGCCC GCCCGAAGCCACGCGCGCCTCAAGACACAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGTATGCGCAAGGAGAAGAGTGTGGCTCTGCTGGAGCATCAGCTCATGGAAGTGGAGGAGA
TGGTGCGTCAGTTCCGGGGGGCTGTAGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGTGAGGCAGAGCGCTGCGGGGAGAGGCAGGGGTTGCCCTGCGGCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGTTGCGTCAGATGGAGAAGGTGCTGGAGGAGGTGGCCGACAAGCCAC
AGACTGAGTTCTCATGAAATACTGCCCTGGTGACCAGCAGGCTACAGAAGATCCTGGCAGAATCACCACC
GCCTGCCCGTTTGGACATCCAGCTGCCCTGTCATCTCAGATGACTTCAAATTCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGTTACAAAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCGAGCCTGGTGC
TGCTCTCCCTCCGGTCGCCGCGTGGAGTGCTCGGACCAGAAGGCGCCGCCGGCCGGGAGGATCCGTGCCA
GTTGACAAGGCCGTGGCGGTGGTGGCGCAGCAGGTGCTGTCCGACGGCGAGCACTACTGGGAGGTGCAG
GTGGGCGAGAAGCCGCGCTGGGCCCTCGGCGTGATCGCGGCCAGGCCAGCCGCCGCGCGCGCTGCACG
CCGTCCCCTCGCAGGGCCTCTGGCTGCTCGGGCTGCGGGACGGCAAGATCCTGGAGGCGCACGTGGAAGC
CAAGGAGCCGCGCGCTGCGCACCCCGGAGAGGCGGCCACGCGCATCGGGATCTACCTAAGCTTCGGC
GACGGAGTCTCTCTTTATGATGCCAGTGACCCCGACGCCCTCGAGCTGCTCTTTGCCTTCCACGAGC
GCCTGCCCGGGCCCGTGTACCCCTTCTTCGACGTATGCTGGCACGACAAGGGCAAAAATGCTCAGCCGCT
GCTGCTGGTGGGGCTGATGGCGAGGAGGCTGA (SEQ ID NO: 24)

图 7

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPCCQAPTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVAVLEHQLV
VEETVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNYSLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAEAPPPARLDIQLPIISDDFKFQV
WRKMFRALMPALEELTFDPSSAHPSLVSSSGRRVECSEQKAPPAGEDPRQFDKAVAV
VAHQQLSEGEHYWEVDVGDKPRWALGVIAAEAPRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRSPERRPTRIGLYLSFGDGVLSFYDASDADALVPLFAFHERLPRPVY
PFFDVCWHDKGKNAQPLLLVGPEGAEA (SEQ ID NO: 7)

ATGTCGGCTGCGCCCGGCTCCTGCACCAGGAGCTGTCCTGCCCGCTGTGCCTGCAGCTGTTTCGACGCGC
CCGTGACAGCCGAGTGCGGCCACAGTTTCTGCCGCGCTGCCTAGGCCGCGTGCGCCGGGAGCCGGCGGC
GGATGGCACC GTTCTCTGCCCCTGCTGCCAGGCCCCACGCGCCGCGAGGCACTCAGCACCAACCTGCAG
CTGGCGCGCTTGGTGGAGGGGCTGGCCAGGTGCCGCGAGGGCCACTGCGAGGAGCACCTGGACCCGCTGA
GCATCTACTGCGAGCAGGACCGCGCGCTGGTGTGCGGAGTGTGCGCCTCACTCGGCTCGCACCGCGGTCA
TCGCCTCCTGCCTGCCGCCGAGGCCACGCACGCCTCAAGACACAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGCATGCGCAAGGAGAAGAGTGTGGCTGTGCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
CAGTGCCTCAGTTCCGGGGGGCCGTGGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGCGAGGCAGAGCGTGTACGGGGTGAGGCAGGGGTGCGCTTGCGCCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGCTGCGGCAGATGGAGAAGGTCCTGGAGGAGGTGGCGGACAAGCCGC
AGACTGAGTTCTCATGAAATACTGCCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGGCTCCCC
ACCCGCGCGTCTGGACATCCAGCTGCCAATTATCTCAGATGACTTCAAATTCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGCGCTGGAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCGAGCCTGGTGG
TGCTTCTCTGCGCCCGCGCTGGAGTGCTCGGAGCAGAAGGCGCCGCGCGGGGAGGACCCGCGCCA
GTTTCGACAAGGCGGTGGCGGTGGTGGCGCACCCAGCAGCTCTCCGAGGGCGAGCACTACTGGGAGGTGGAT
GTTGGCGACAAGCCGCGCTGGGCGCTGGGCGTGATCGCGGCCGAGGCCCGCCGCGGGCGCCTGCACG
CGGTGCCCTCGCAGGGCCTGTGGCTGCTGGGGCTGCGCGAGGGCAAGATCCTGGAGGCACACGTGGAGGC
CAAGGAGCCGCGCGCTCTGCGCAGCCCCGAGAGGCGGCCCACGCGCATTGGCCTTTACCTGAGCTTCGGC
GACGGCGTCTCTCTCTTCTACGATGCCAGCGACGCCGACGCGCTCGTGCCGCTTTTTGCCTTCCACGAGC
GCCTGCCCAGGCCCGTGTACCCCTTCTTCGACGTGTGCTGGCACGACAAGGGCAAGAAATGCCCAGCCGCT
GCTGCTCGTGGGTCCCGAAGGCGCCGAGGCCTGA (SEQ ID NO: 13)

图 8

MSAAPGLLRQELSCPLCLQLFDAPVTAECGHSFCRACLIRVAGE
PAADGTVACPCQAPTRPQALSTNLQLSRLVEGLAQVPQGHCEEHLDPISIYCEQDRT
LVCGVCASLGSHRGHRLLPAAEAQARLKTQLPQQKMLQEACMRKEKTVAVLEHQVE
VEETVRQFRGAVGEQLGKMRMFLAALESSLDREAERVGRDAGVALRRELSSLNSYLEQ
LRQMEKVL EEVADKPQTEFLMKFCLVTSRLQKILSEAPPPARLDIQLPVISDDFKFQV
WKKMFRALMPALEELTFDPSSAHPSLVSSSGRRVECDQKAPPAGEDTRQFDKAVAV
VAQQLLSQGEHYWEVEVGDKPRWALGVMAADASRRGRLHAVPSQGLWLLGLRDGKILE
AHVEAKEPRALRTPERPPARIGLYLSFADGVLAFYDASNPDVLTPIFSFHERLPGPVY
PIFDVCWHDKGKNAQPLLLVGPEQEQA (SEQ ID NO: 8)

ATGTCGGCTGCACCCGGCCTTCTGCGTCAGGAACTGTCCTGCCACTGTGCTTGCAGCTGTTTCGATGCGC
CAGTGACGGCTGAGTGTGGCCACAGTTTCTGCCGTGCCTGCCTGATCCGGGTGGCAGGGGAGCCTGCTGC
GGACGGCACAGTTGCCTGTCCCTGTTGTGTCAGGCACCTACACGGCCGAGGCTCTAAGCACTAACCTCCAG
TTGTACAGCCTTGTGGAGGGTTTGGCGCAAGTGCCCCAAGGCCACTGCGAGGAACACCTGGATCCACTGA
GCATCTACTGCGAGCAGGACCGCACACTTGTGTGTGGTGTGTGTGCCTCGCTCGGTTCTACCGTGGTCA
TCGTCTCCTGCCGTGCCGTGAAGCCCAAGCACGCCTCAAGACACAGCTTCCACAGCAGAAGATGCAGCTG
CAGGAGGCATGCATGCCAAGGAGAAGACTGTAGCGGTGCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
CAGTGCGCCAGTTCCGGGGAGCTGTGCGGGAGCAGCTGGGGAAGATGCGGATGTTCTGGCTGCCCTAGA
AAGTTCTCTGGACCGTGAAGCAGAAAGGGTTCCGGGGTGATGCTGGGGTTGCCTTGCCTCGGGAGCTGTCA
AGCCTGAACTCTTACCTAGAGCAACTGAGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCTGACAAGCCAC
AGACAGAATTCCTCATGAAATTCTGCCCTGGTAACCAGCAGGCTGCAGAAGATCCTGTCAGAGGCACCACC
ACCGGCAAGGCTAGATATCCAGCTGCCTGTCATCTCAGATGACTTCAAATTCAGGTGTGGAAGAAGATG
TTCCGGGCTCTGATGCCAGCGCTGGAGGAAGTGAATTTGACCCAGCTCTGCGCACCCGAGCCTGGTGG
TGTCCTCCTCTGGTCGCCGAGTGGAGTGCTCAGACCAGAAGGCGCCGCCAGCGGGAGAAACACACGCTCA
GTTTCGACAAGGCAGTAGCGGTGGTGGCGCAGCAGCTGCTGTACAGGGCGAGCACTATTGGGAGGTGGAG
GTGGGCGACAAACCACGCTGGGCCCTGGGAGTGATGGCGGCTGACGCTTCCCGCCGTGGCCGGCTGCACG
CGGTGCCCTCACAGGGGCTGTGGCTGCTGGGTCTGCGCGATGGCAAGATCCTGGAGGCGCACGTGGAGGC
CAAGGAGCCGCGGGCACTGCGCACCCCAAGAGAGGCCTCCGGCGCGCATTGGCCTCTACCTAAGCTTCGCA
GATGGCGTCTGGCTTTCTATGATGCGAGCAACCCCGACGTACTTACGCCAATCTTTTCTTCCACGAGC
GTCTGCCCCGGGCGGTGTACCCCATCTTTGACGTGTGCTGGCAGCACAAGGGCAAGAAATGCCAGCCCCCT
GCTGCTTGTGGGGCCGGAGCAGGAACAGGCCTGA (SEQ ID NO: 14)

图 9

MSTAPGLLRQELSCPLCLQLFDAPVTAECGHSFCRACLIRVAGE
PADDGTVACPPCQASTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRT
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQAQLQEACMRKEKSVAVLEHQVE
VEETVRQFRGAVGEQLGKMRMFLAALESSLDREAERVGEAGVALRRELSSLNSYLEQ
LRQMEKVL EEVADKPQTEFLMKFCLVTSRLQKILSEAPPPARLDIQLPVISDDFKFQV
WKKMFRALMPELEELTFDPSSAHPSLVVSASGRRVECSEQKAPPAGEDTCQFDKTVAV
VAKQLLSQGEHYWEVEVGDKPRWALGVMAADASRRGR LHAVPSQGLWLLGLRDGKILE
AHVEAKEPRALRTPERPPARIGLYLSFADGVLTIFYDASNTDALTPLFSFHERLPGPVY
PMFDVCWHDKGKNSQPLLLVGPDPSEQA (SEQ ID NO: 9)

ATGTGCGACTGCACCAGGCCCTTTTGCGCCAGGAACTGTCTTGCCCGCTGTGCTTGCAGCTGTTTCGATGCAC
CAGTGACCGCTGAGTGTGGCCACAGTTTCTGCCGTGCCTGCCTGATCCGTGTGGCAGGGGAGCCTGCCGA
CGATGGCACGGTTGCCTGTCCCTGTTGTGTCAGGCATCTACTCGGCCACAGGCGCTAAGCACTAACCTCCAG
TTGGCACGCCCTTGTGGAGGGTTTGGCACAAGTGCCCCAAGGCCACTGCGAGGAACACCTGGATCCACTGA
GCATCTACTGCGAGCAGGACCGCACACTTGTGTGTGGTGTGTGTGCCTCTCTCGGTTACACCGTGGTCA
CCGTCTTCTGCCTGCCGCAGAAGCCCATGCACGTCTCAAGACACAGCTTCCACAACAGAAGGCCAGCTG
CAGGAGGCATGCATGCGCAAGGAGAAGAGTGTAGCAGTCCTGGAGCATCAGCTGGTGGAGGTGGAGGAGA
CCGTGCGTCAGTTCGGGGGAGCTGTTGGGGAGCAGCTGGGGAAGATGCGGATGTTCCCTGGCTGCCCTAGA
AAGTTCTTTGGACCGTGAAGCAGAAAAGGGTTTCGAGGTGAGGCAGGGGTTGCCTTGCGGCGGGAGCTGTCA
AGCCTGAACTCTTACCTGGAGCAACTGAGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCTGACAAGCCAC
AGACAGAATTCTCATGAAATTCTGCCTGGTGACCAGCAGGCTGCAGAAGATTCTGTCAGAGGCACCACC
CCCAGCAAGGCTAGATATCCAGCTGCCTGTCATCTCAGATGACTTCAAATTCCAGGTGTGGAAGAAGATG
TTCCGGGCTCTGATGCCAGAGTTGGAGGAACTGACTTTTGACCCAGCTCTGCGCACCCGAGCCTGGTGG
TGTCGCGCTCTGGTCGCCGAGTGGAGTGCTCGGAGCAGAAGGCGCCGCCAGCAGGAGAAGACACGTGCCA
GTTTCGACAAGACGGTAGCGGTAGTGGCGAAGCAGCTGCTGTACAGGGGGAGCACTACTGGGAGGTGGAG
GTGGGCGACAAGCCACGCTGGGCCCTGGGTGTGATGGCGGCTGACGCTTCCCGTCGTGGCCGCTGCACG
CGGTGCCCTCACAGGGGCTGTGGTTGCTCGGCCTGCGCGATGGCAAGATCCTGGAGGCACACGTGGAGGC
CAAGGAGCCACGGGCACTGCGCACCCAGAGAGGCCACCAGCGCGCATTGGCCTCTACCTAAGCTTTGCA
GATGGCGTCTGACTTTCTATGATGCAAGCAACACCGACGCGCTTACACCGCTCTTTTCTTTTCATGAGC
GTCTGCCTGGGCCGTGTACCCCATGTTTGACGTGTGCTGGCACGACAAGGGCAAGAAATCTCAGCCGCT
GTTGCTCGTGGGGCCAGACAGTGAGCAGGCCTGA (SEQ ID NO: 15)

图 10

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPCCQAPTRPQALSTNLQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVAVLEHQVLE
VEETVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAEAPPPARLDIQLPIISDDFKFQV
WRKMFRALMPALEELTFDPSSAHPSLVSSSGRRVECSEQKAPPAGEDPRQFDKAVAV
VAHQQLSEGEHYWEVEVGDKPRWALGVIAAEGPRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRSPERRPTRIGLYLSFGDGVLSFYDASDADALVPLFAFHERLPGPVY
PFFDVCWHDKGKNSQPLLLVGSEGAEA (SEQ ID NO: 10)

ATGTCGGCTGCGCCGGGCTCCTGCACCAGGAGCTGTCCTGCCCGCTGTGCCTGCAGCTGTTTCGACGCGC
CCGTGACAGCCGAGTGCGGCCACAGTTTCTGTCGCGCCTGCCTGGGCCGCGTGGCCGGGAACCGGCGGC
GGATGGCACC GTTCTCTGCCCCTGCTGTCAGGCCCCACGCGGCCGAGGCACTCAGCACCAACCTGCAG
CTGGCGCGCTTGGTGGAGGGGCTGGCCAGGTGCCGAGGGGCACTGCGAGGAGCACCTGGACCCGCTGA
GCATCTACTGTGAGCAGGACCGCGCGCTGGTGTGCGGAGTGTGCGCCTCACTCGGCTCGCACCGCGGTCA
TCGCCTGCTGCCC GCCCGAGGCCCCACGCACGCCTCAAGACGCAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGCATGCGCAAGGAGAAGAGTGTAGCTGTGCTGGAGCATCAGTTGGTGGAGTGGAGGAGA
CAGTGCCTCAGTTCCGGGGGGCGCTGGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGTGAGGCAGAGCGTGTGCGGGGTGAGGCAGGGGTGCGCTTGCGCCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGCTGCGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCCGACAAGCCGC
AGACTGAGTTCTTAATGAAATACTGCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGGCTCCCC
ACCCGCCCGTCTGGACATCCAGCTGCCAATCATCTCAGATGACTTCAAATTCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGCGCTGGAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCAGCCTGGTGG
TGCTTTCCTCCGGCCGCCGCGTGAGTGTGCGGAGCAGAAGGCGCCGCCGGCGGGGAGGACCCGCGCCA
GTTGACAAGGCGGTAGCGGTGGTGGCGCACCCAGCAGCTCTCCGAGGGCGAACACTACTGGGAGGTGGAG
GTGGGCGACAAGCCGCGCTGGGCGCTGGGTGTGATCGCGGCCGAGGGGCCCCGTGCGGGGCGCTGCACG
CGGTGCCCTCGCAGGGCCTGTGGCTGCTGGGGCTGCGTGAGGGCAAGATCCTGGAGGCTCACGTGGAGGC
CAAGGAGCCGCGCGCTCTGCGCAGCCCCGAGCGCGGCCACGCGCATCGGCCTCTACCTGAGCTTCGGC
GACGGCGTCTCTCTCTTCTACGATGCCAGCGACGCCGACGCGCTCGTGCCGCTTTTTGCCTTCCACGAGC
GCCTGCCTGGGCCCGTGTACCCCTTCTTCGACGTGTGCTGGCACGACAAGGGCAAGAACTCCAGCCGCT
GCTGCTCGTGGGGTCCGAAGGCGCCGAAGCCTGA (SEQ ID NO: 16)

图 11

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLGRVAGE
PAADGTVLCPSCQAPTRPQALSTNQQLARLVEGLAQVPQGHCEEHLDPISIYCEQDRV
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVGVLEQQQLVE
VEETVRQFRGAVGEQLGKMRLFLAALEGSIDREAERVRGEAGVALRRELGSLSKSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAEAPPPARLDIQLPVISDDFKFQV
WRKMFRLMPAMQELTFDPSTAHPSLVLSASGRRVECSEQKAPPAGEDPRQFDKAVAV
VTHQLLSEGEHYWEVEVGDKPRWALGVIGAQAGRRGR LHAVPSQGLWLLGLREGKILE
AHVEAKEPRALRTPERRPSRIGIYLSFADGVLSFYDASDADALELLFAFHERLPGPVY
PFFDVCWHDKGKNAQPLLLVGPDSGGEA (SEQ ID NO: 11)

ATGTCAGCTGCGCCCGGCTCCTGCACCAGGAGCTGTCCTGTCCGCTGTGCCTGCAGCTGTTTCGATGCGC
CGGTGACGGCTGAGTGCGGCCACAGCTTCTGCCGCGCCTGCCTGGGCCGCGTGGCAGGGGAGCCAGCCGC
GGATGGCACGGTGCTCTGCCCCAGCTGCCAGGCACCCACGCGGCCGAGGCGCTCAGCACCAACCAGCAG
CTGGCGCGCTGTTGGAGGGGCTGGCGCAGGTGCCGAGGGCCACTGCGAGGAGCACCTAGACCCGCTCA
GCATCTACTGCGAGCAGGACCGCGTGCTGCTGTGCGGCGTCTGCGCCTCGCTGGGTTCGCACCGCGGCCA
CCGCTGCTGCCCCGCCGCCGAAGCCCATGCGCGCCTTAAGACGCAGCTCCCGCAGCAGAAAGCTGCAGCTG
CAGGAGGCGTGATGCGGAAGGAGAAGAGCGTGGGTGTGCTGGAGCAACAAGTGGTGGAGTGGAGGAGA
CGGTGCGTCAGTTCCGGGGGGCAGTGGGGGAGCAGCTGGGCAAGATGCGGTTGTTCTGGCTGCACTGGA
GGGCTCCTTGGAACGAGAAGCAGAGCGTGTCGGGGTGAGGCGGGGGTGCCTTGCGGAGGGAGCTGGGG
AGCCTGAAGTCTTACTTGAGCAGCTGCGGCAGATGGAGAAGGTGCTGGAGGAGGTGGCAGACAAGCCCC
AGACCGAGTTCCTCATGAAATACTGCCTGGTGACCAGCAGGCTGCAGAAGATCCTGGCAGAGGCGCCCC
ACCTGCCCCGCTGGACATTCAGCTGCCTGTCATCTCAGACGACTTCAAATTCAGGTGTGGAGAAAGATG
TTCCGGGCCCTGATGCCAGCGATGCAGGAGCTGACCTTTGACCCAGCACGGCCACCCGAGCCTGGTG
TGTCGGCCTCGGGCCGCCGCGTGAGTGCTCGGAGCAGAAGGCGCCGCGCCGGAGAGGACCCGCGCCA
GTTTCGACAAGGCGGTGGCGGTGGTGACGCACCAGCTGCTGTCGGAAGGCGAGCACTACTGGGAGGTGGAG
GTGGGCGACAAGCCACGCTGGGCGCTGGGCGTGATCGGGGCCAGGCCGGTCGCCGCGCGCGCTGCACG
CCGTGCCCTCGCAGGGCCTCTGGCTGCTCGGGCTGCGCGAGGGCAAGATCCTGGAGGCTCACGTCGAGGC
CAAGGAGCCGCGCGCCCTGCGCACCCCGGAGAGGCGGCGTTCGCGCATCGGGATCTACCTGAGCTTCGCG
GATGGCGTCTCTCGTTCTACGACGCCAGCGACGCCGACGCGTGGAGCTGCTCTTCGCCTTCCACGAAC
GCCTGCCGGGGCCCGTGTAACCCCTTCTTCGACGTGTGCTGGCACACAAGGGCAAGAACGCTCAGCCGCT
CCTGCTGGTGGGGCCCGACAGCGGCGGGGAGGCCTGA (SEQ ID NO: 17)

图 12

MSAAPGLLHQELSCPLCLQLFDAPVTAECGHSFCRACLSRVAGE
PAADGTVPCPCQALTRPQALSTNQQLARLVEGLAQVPQGHCEEHLDPISYCEQDRA
LVCGVCASLGSHRGHRLLPAAEAHARLKTQLPQQKLQLQEACMRKEKSVALLEHQIME
VEEMVRQFRGAVGEQLGKMRVFLAALEGSIDREAERVGEAGVALRRELGSLSNSYLEQ
LRQMEKVL EEVADKPQTEFLMKYCLVTSRLQKILAEAPPPARLDIQLPVISDDFKFQV
WRKMFRALMPVTKELTFDPSSAHPSLVLSPSGRRVECDQKAPPAGEDPCQFDKAVAV
VAQQVLS DGEHYWEVQVGEKPRWALGVIAAQASRRGR LHAVPSQGLWLLGLRDGKILE
AHVEAKEPRALRTPERRPTRIGIYLSFGDGVLSFYDASDPDALELLFAFHERLPGPVY
PFFDVCWHDKGNAPLLLVGPDGEEA (SEQ ID NO: 12)

ATGTGCGCCGCGCCGGGCTCCTGCACCAGGAGCTGTCTGCCCGCTCTGCCTGCAGCTGTTTGACGCGC
CGGTGACCGCCGAGTGCGGCCACAGTTTCTGCCGCGCTGCCCTGAGCCGCGTGGCTGGGAGCCGGCGGC
GGACGGCACCGTGCCCTGCCCTGCTGCCAGGCACTCACGCGGCCACAGGCGCTCAGCACCAACCAGCAG
CTGGCGCGCTTGGTGGAGGGGCTGGCGCAGGTGCCGAGGGCCACTGCGAGGAGCACCTAGACCCGCTCA
GCATCTACTGCGAGCAGGATCGAGCGCTCGTGTGCGGCGTGTGCGCCTCGCTCGGCTCGCACCGCGGCCA
CCGCTGCTGCCCGCCGCCAAGCCACGCGCGCCTCAAGACACAGCTGCCACAGCAGAACTGCAGCTG
CAGGAGGCATGTATGCGCAAGGAGAAGAGTGTGGCTCTGCTGGAGCATCAGCTCATGGAAGTGGAGGAGA
TGGTGCGTCAGTTCCGGGGGGCTGTAGGGGAGCAGCTGGGCAAGATGCGGGTGTTCCTGGCTGCACTGGA
GGGCTCCTTGACCGTGAGGCAGAGCGCGTGCGGGGAGAGGCAGGGGTGCCCCTGCGGCGGGAGCTGGGG
AGCCTGAACTCTTACCTGGAGCAGTTGCGTCAGATGGAGAAGGTGCTGGAGGAGGTGGCCGACAAGCCAC
AGACTGAGTTCTCATGAAATACTGCCCTGGTGACCAGCAGGCTACAGAAGATCCTGGCAGAAGCACCACC
GCCTGCCCCTTTGGACATCCAGCTGCCCTGTCATCTCAGATGACTTCAAATTCAGGTGTGGAGGAAGATG
TTCCGGGCTCTGATGCCAGTTACAAAGGAGCTGACCTTTGACCCGAGCTCTGCGCACCCGAGCCTGGTGC
TGCTCTCCCTCCGGTCGCCGCGTGAGTGCTCGGACCAGAAGGCGCCGCCGGCCGGGAGGATCCGTGCCA
GTTGACAAGGCCGTGGCGGTGGTGGCGCAGCAGGTGCTGTCCGACGGCGAGCACTACTGGGAGGTGCAG
GTGGGCGAGAAGCCGCGCTGGGCCCTCGGCGTGATCGCGGCCAGGCCAGCCGCCGCGCGCGCTGCACG
CCGTCCCCTCGCAGGGCCTCTGGCTGCTCGGGCTGCGGGACGGCAAGATCCTGGAGGCGCACGTGGAAGC
CAAGGAGCCGCGCGCTGCGCACCCCGGAGAGGCGGCCACGCGCATCGGGATCTACCTAAGCTTCGGC
GACGGAGTCTCTCTTTTATGATGCCAGTGACCCCGACGCCCTCGAGCTGCTCTTTGCCTTCCACGAGC
GCCTGCCCCGGGCCGTGTACCCCTTCTTCGACGTATGCTGGCACGACAAGGGCAAAAATGCTCAGCCGCT
GCTGCTGGTGGGGCTGATGGCGAGGAGGCCTGA (SEQ ID NO: 18)

图 13

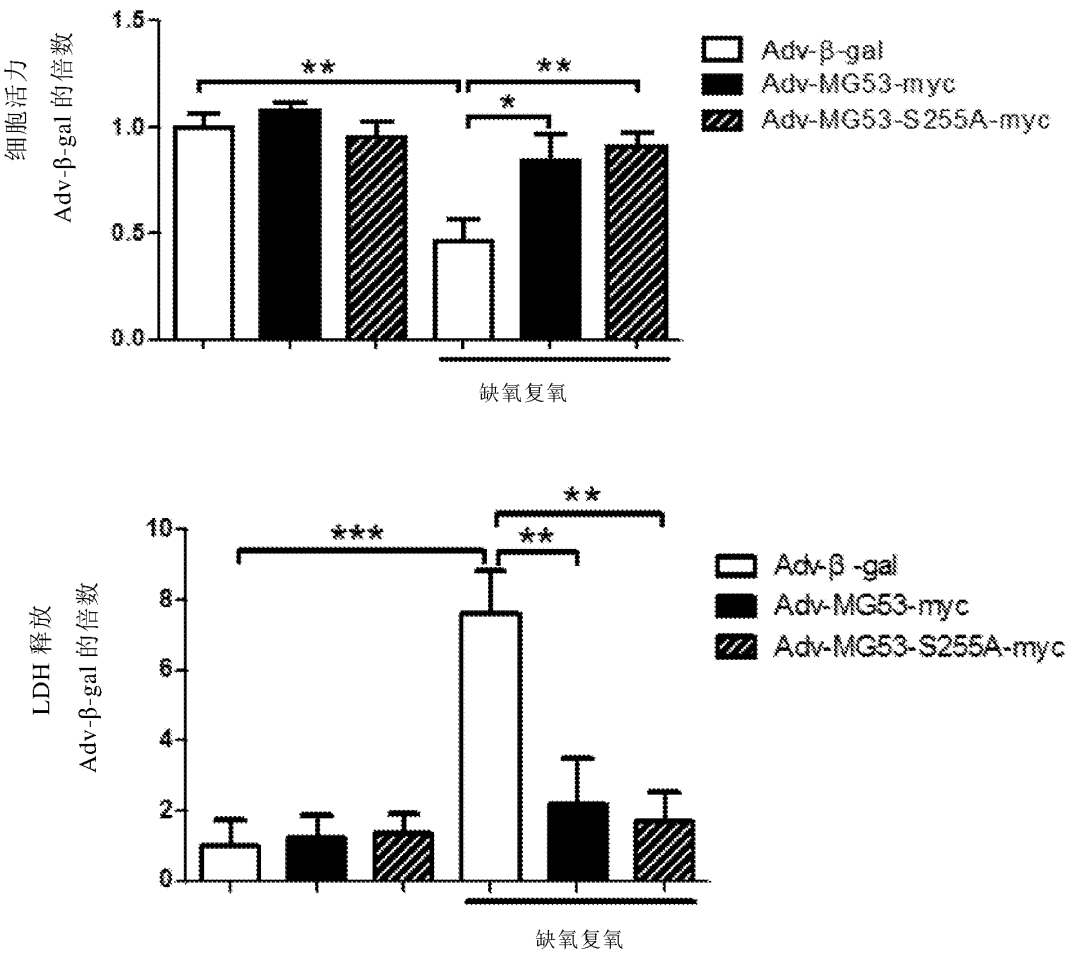


图 14

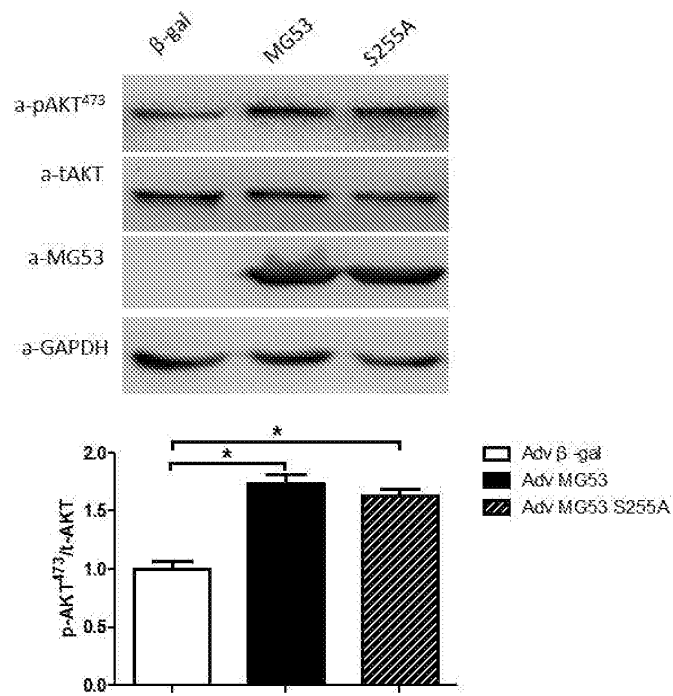
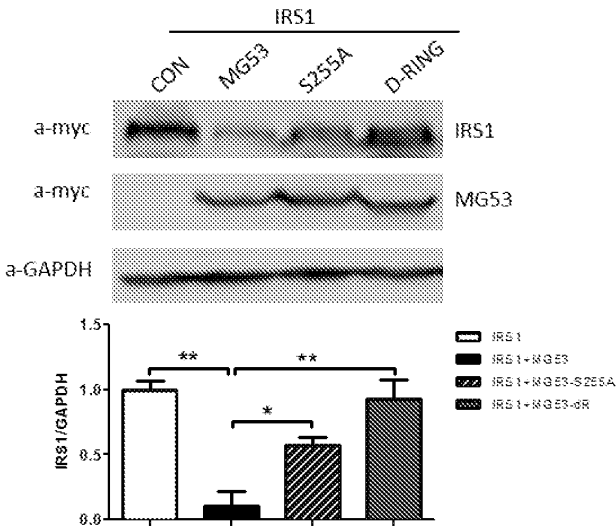


图 15

A



B

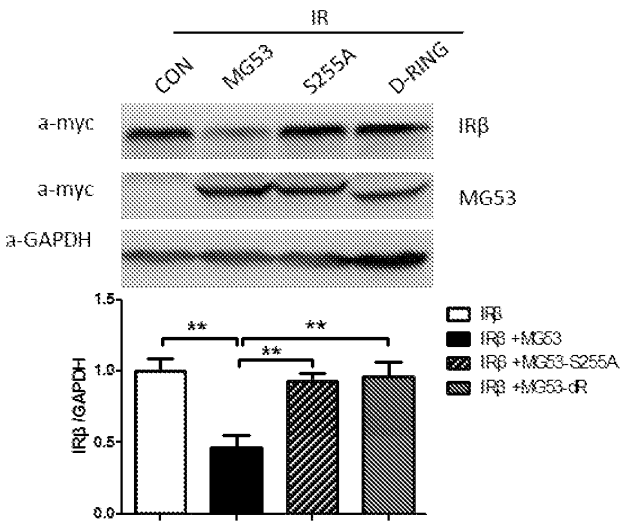


图 16

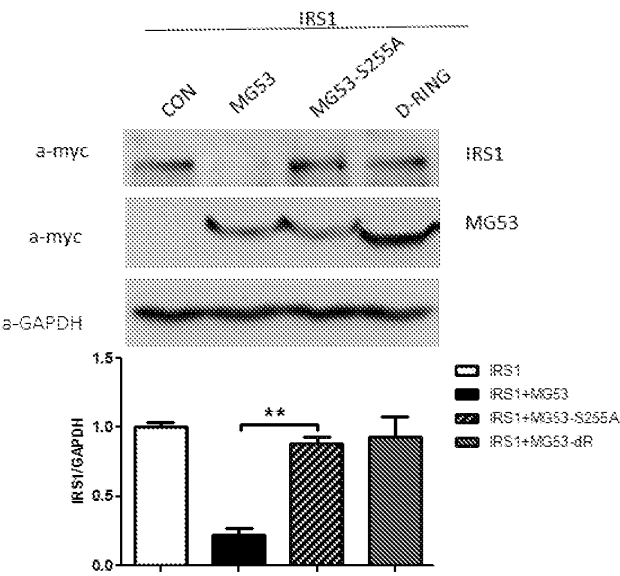


图 17

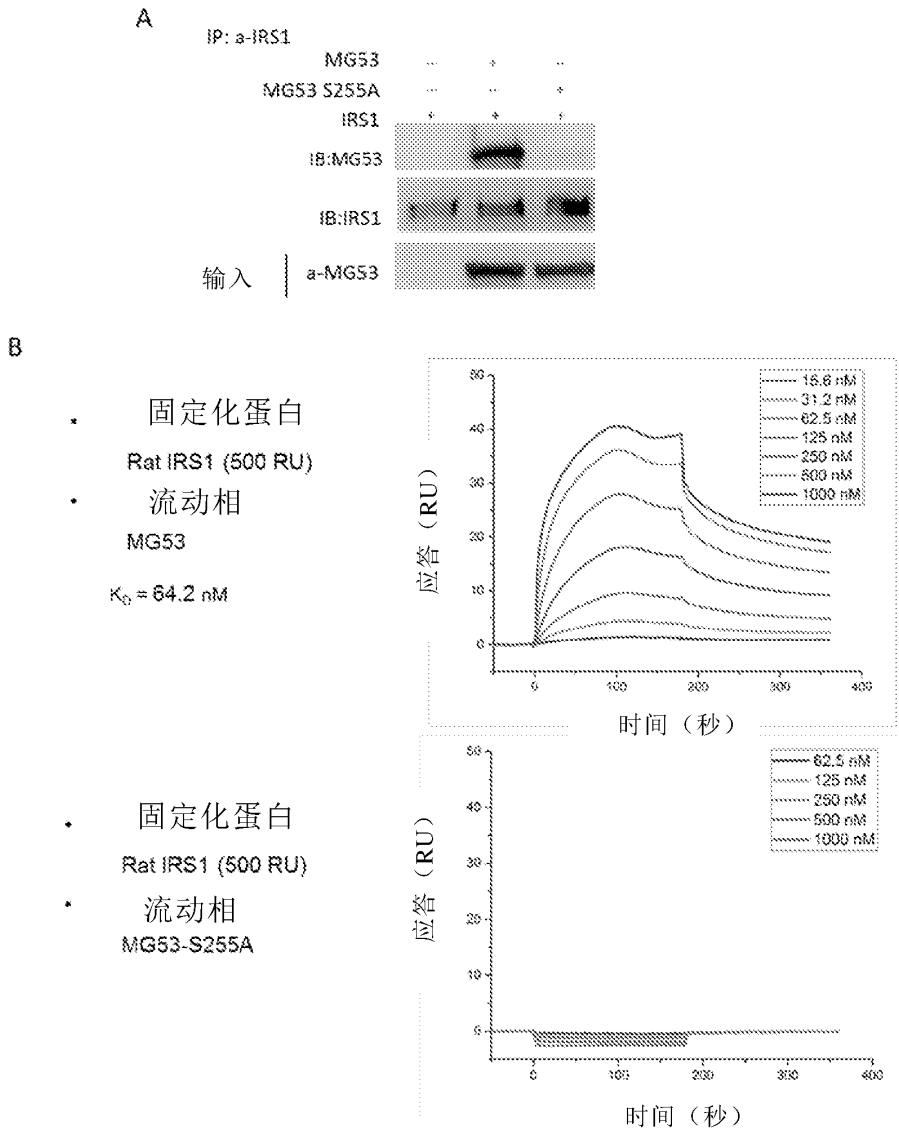


图 18

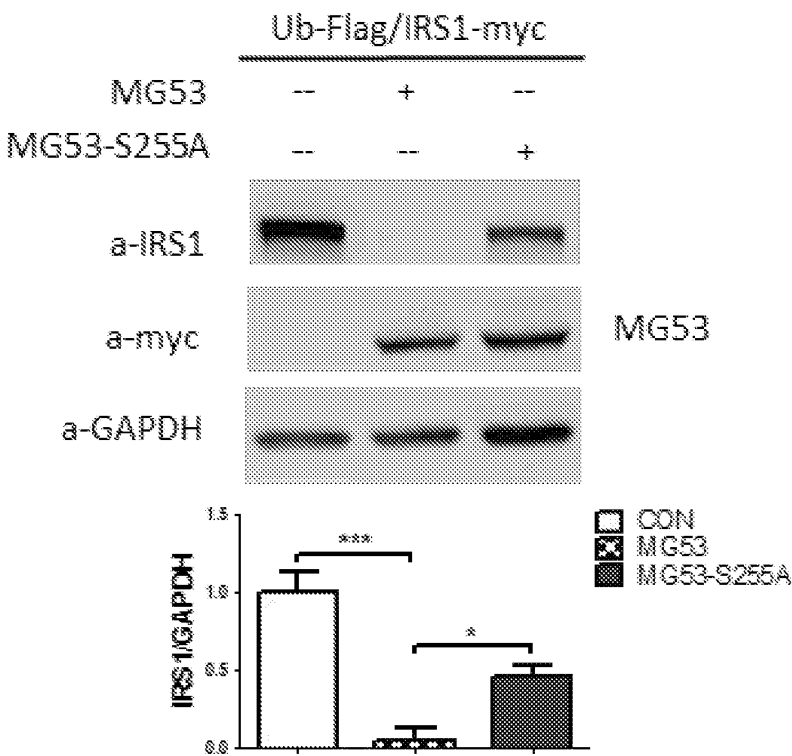


图 19

MSAAPGLLHQ ELSCPLCLQL FDAPVTAECG HSFCRACLGR VAGEPAADGT VLCPCQAPT
 RPQALSTNLQ LARLVEGLAQ VPQGHCEEHL DPLSIYCEQD RALVCGVCAS LGSHRGHRLI
 PAAEAHARLK TQLPQQKLQL QEACMRKEKS VAVLEHQLVE VEETVRQFRG AVGEQLGKMR
 VFLAALEGSL DCEAERVGRG AGVALRRELG SLNSYLEQLR QMEKVLEEVA DKPQTEFLMK
 YCLVTSRLQK ILAESPPPAR LDIQLPIISD DFKFQVWRKM FRALMPALEE LTFDPSSAHP
 SLVVSSSGRR VECSEQKAPP AGEDPRQFDK AVAVVAHQQL SEGEHYWEVD VGDKPRWALG
 VIAAEAPRRG RLHAVPSQGL WLLGLREGKI LEAHVEAKEP RALRSPERRP TRIGLYLSFG
 DGVLSFYDAS DADALVPLFA FHERLPRPVY PFFDVCWHDK GKNAQPLLLV GPEGAEA (SEQ ID NO: 139)

atgtcggtcg cgcccgccct cctgcaccag gagctgtcct gcccgctgtg cctgcagctg
 ttcgacgctg ccgtgacagc cgagtgcggc cacagtttct gccgcgcctg cctaggccgc
 gtggccgggg agccggcgcc ggatggcacc gttctctgcc cctgctgcca ggcacccacg
 cggccgcagg cactcagcac caacctgcag ctggcgcgcc tgggtggagg gctggccagc
 gtgccgcagg gccactgcga ggagcacctg gaccgctga gcatctactg cgagcaggac
 cgcgcgctgg tgtgcggagt gtgcgcctca ctgggctcgc accgcggtca tcgctcctg
 cctgcgcgcg agggccacgc acgcctcaag acacagctgc cacagcagaa actgcagctg
 caggaggcat gcatgcgtaa ggagaagagt gtggctgtgc tggagcatca gctggtggag
 gtggaggaga cagtgcgtca gttccggggg gccgtggggg agcagctggg caagatgcgg
 gtgttcctgg ctgcaactgga gggctccttg gactgcgagg cagagcgtgt acggggtgag
 gcaggggtcg ccttgcgcgc ggagctgggg agcctgaact cttacctgga gcagctgcgg
 cagatggaga aggtcctgga ggaggtggcg gacaagccgc agactgagtt cctcatgaaa
 tactgcctgg tgaccagcag gctgcagaag atcctggcag agtctcccc acccgccgt
 ctggacatcc agctgccaat tatctcagat gacttcaaat tccaggtgtg gaggaagatg
 ttccgggctc tgatgccagc gctggaggag ctgacctttg acccgagctc tgcgcacccg
 agcctggtgg tgtcttctc tggccgccgc gtggagtgtc cggagcagaa ggcgcgcgcg
 gccggggagg acccgcgcca gttcgacaag gcggtggcgg tgggtggcgca ccagcagctc
 tccgagggcg agcactactg ggaggtggat gttggcgaca agccgcgctg ggcgctgggc
 gtgatcgcgg ccgaggcccc ccgcccggg cgctgcacg cggtgccctc gcagggcctg
 tggctgctgg ggctgcgcga gggcaagatc ctggaggcac acgtggaggc caaggagccg
 cgcgctctgc gcagccccga gagcgggccc acgcgcattg gcctttacct gagcttcggc
 gacggcgtcc tctccttcta cgatgccagc gacgccgac cgctcgtgcc gctttttgcc
 ttccacgagc gcctgcccag gcccggtgtac cccttcttcg acgtgtgctg gcacgacaag
 ggcaagaatg cccagccgct gctgctcgtg ggtcccgaag gcgccgaggc ctga (SEQ ID NO: 143)

图 20

MRKEKSVAVL EHQLVEVEET VRQFRGAVGE QLGKMRVFLA ALEGSLDREA ERVRGEAGVA
 LRRELGSLNS YLEQLRQMEK VLEEVADKPQ TEFLMKYCLV TSRLQKILAE SPPPARLDIQ
 LPIISDDFKF QVWRKMFRAL MPALEELTFD PSSAHPSLVV SSSGRRVECS EQKAPPAGED
 PRQFDKAVAV VAHQQLSEGE HYWEVDVGDK PRWALGVIAA EAPRRGRLHA VPSQGLWLLG
 LREGKILEAH VEAKEPRALR SPERRPTRIG LYLSFGDGV L SFYDASDADA LVPLFAFHER
 LPRPVYPFFD VCWHDKGKNA QPLLLVGPEG AEA (SEQ ID NO: 140)

atgcgcaagg agaagagtgt ggctgtgctg gagcatcagc tgggtggaggt ggaggagaca
 gtgcgtcagt tccgggggggc cgtggggggag cagctgggca agatgcgggt gttcctggct
 gcactggagg gctccttggga ccgcgaggca gacgtgttac ggggtgaggc aggggtcgcc
 ttgcgccggg agctggggag cctgaactct tacctggagc agctgcggca gatggagaag
 gtcttgagg aggtggcgga caagccgcag actgagttcc tcatgaaata ctgcctggtg
 accagcaggc tgcagaagat cctggcagag tctccccac ccgccgtct ggacatccag
 ctgccaatta tctcagatga cttcaaattc caggtgtgga ggaagatgtt ccgggctctg
 atgccagcgc tggaggagct gacctttgac ccgagctctg cgcacccgag cctggtggtg
 tcttctctg gccgccgct ggagtgtctg gacgagaagg cgccgccgc cggggaggac
 ccgcccgagt tcgacaaggc ggtggcggtg gtggcgacc agcagctctc cgaggcgag
 cactactggg aggtggatgt tggcgacaag ccgcgctggg cgctgggcgt gatcgcgcc
 gaggcccc gccgcgggcg cctgcacgcg gtgccctcgc agggcctgtg gctgctgggg
 ctgcgcgagg gcaagatcct ggaggcacac gtggaggcca aggagccgcg cgctctgcgc
 agccccgaga ggccggccac gcgcattggc cttacctga gcttcggcga cggcgtctc
 tccttctacg atgccagcga cgccgacgcg ctcgtgccgc ttttgcctt ccacgagcgc
 ctgcccaggc ccgtgtaccc cttcttcgac gtgtgctgga acgacaagg caagaatgcc
 cagccgctgc tgctcgtggg tcccgaaggc gccgaggcct ga (SEQ ID NO: 144)

图 21

MRKEKSVAVL EHQLVEVEET VRQFRGAVGE QLGKMRVFLA ALEGS LDREA ERVRGEAGVA
 LRRELGSLNS YLEQLRQMEK VLEEVADKPQ TEFLMKYCLV TSRLQKILAE SPPPARLDIQ
 LPIISDDFKF QVWRKMFRA LMPALEELTFD PSSAHPSLVV SSSGRRVECS GQKAPPAGED
 PRQFDKAVAV VAHQQLSEGE HYWEVDVGDK PRWALGVIAA EAPRRGRLHA VPSQGLWLLG
 LREGKILEAH VEAKEPRALR SPERRPTRIG LYLSFGDGV L SFYDASDADA LVPLFAFHER
 LPRPVYPFFD VCWHDKGKNA QPLLLVGPEG AEA (SEQ ID NO: 141)

atgcgtaagg agaagagtgt ggctgtgctg gagcatcagc tggaggaggt ggaggagaca
 gtgcgtcagt tccggggggc cgtgggggag cagctgggca agatgcgggt gttcctggct
 gcactggagg gctccttgga ccgcgaggca gagcgtgtac ggggtgaggc aggggtcgcc
 ttgcgcggg agctggggag cctgaactct tacctggagc agctgcggca gatggagaag
 gtcctggagg aggtggcgga caagccgcag actgagttcc tcatgaaata ctgcctgggtg
 accagcaggc tgcagaagat cctggcagag tctccccac ccgccgtct ggacatccag
 ctgccaat tctcagatga cttcaaatc caggtgtgga ggaagatgt ccgggtctctg
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 tcttctctg gccgccgct ggagtgtctg gggcagaagg cgccgccggc cggggaggac
 ccgcgccagt tcgacaaggc ggtggcggtg gtggcgacc agcagctctc cgaggcgag
 cactactgg aggtggatgt tggcgacaag ccgcgctgg cgctgggct gatcgcgcc
 gagggcccc gccgcggcg cctgcacgc gtgccctcgc agggcctgtg gctgctgggg
 ctgcgcgagg gcaagatcct ggaggcacac gtggaggcca aggagccgc cgctctgcgc
 agccccgaga ggcggccac gcgcattggc ctttacctga gcttcggcga cggcgtcctc
 tccttctacg atgccagcga cgccgacgc ctcgtgccgc tttttgcctt ccacgagcgc
 ctgcccaggc ccgtgtacc cttcttcgac gtgtgctggc acgacaagg caagaatgcc
 cagccgctgc tgctcgtggg tcccgaagg gccgaggcct ga (SEQ ID NO: 145)

图 22

MSAAPGLLHQ ELSCLPLCLQL FDAPVTAECG HSFCRACLGR VAGEPAADGT VLCPCQCAPT
 RPQALSTNLQ LARLVEGLAQ VPQGHCEEHL DPLSIYCEQD RALVCGVCAS LGSHRGHRL
 PAEEAHARLK TQLPQQKLQL QEACMRKEKS VAVLEHQLVE VEETVRQFRG AVGEQLGKMR
 VFLAALEGLS DREAERVGRG AGVALRRELG SLNSYLEQLR QMEKVLEEVA DKPQTEFLMK
 YCLVTSRLQK ILAESPPPAR LDIQLPIIS (SEQ ID NO: 142)

atgtcggctg cgcccgccct cctgcaccag gagctgtcct gcccgctgtg cctgcagctg
 ttcgacgcgc ccgtgacagc cgagtgcggc cacagtttct gccgcgcctg cctaggccgc
 gtggccgggg agccggcggc ggatggcacc gttctctgcc cctgctgcca ggccccacg
 cggccgcagg cactcagcac caacctgcag ctggcgcgcc tgggtggagg gctggcccag
 gtgcgcgagg gccactgcga ggagcacctg gaccgctga gcatctactg cgagcaggac
 cgcgcgctgg tgtgcggagt gtgcgcctca ctgggctcgc accgcgggtca tcgcctcctg
 cctgccgccg agggccacgc acgcctcaag acacagctgc cacagcagaa actgcagctg
 caggaggcat gcatgcgtaa ggagaagagt gtggctgtgc tggagcatca gctggtggag
 gtggaggaga cagtgcgtca gttccggggg gccgtggggg agcagctggg caagatgcgg
 gtgttccttg ctgactgga gggctccttg gaccgcgagg cagagcgtgt acggggtgag
 gcaggggtcg ccttgcccg ggagctggg agcctgaact cttacctgga gcagctgcgg
 cagatggaga aggtcctgga ggaggtggcg gacaagccgc agactgagtt cctcatgaaa
 tactgcctgg tgaccagcag gctgcagaag atcctggcag agtctcccc acccgcccg
 ctggacatcc agctgccaat tatctcctga (SEQ ID NO: 146)

图 23

MSAAPGLLHQ ELSCLPLCLQL FDAPVTAECG HSFCRACLGR VAGEPAADGT VLCPCQAPT
 RPQALSTNLQ LARLVEGLAQ VPQGHCEEHL DPLSIYCEQD RALVCGVCAS LGSHRGHRL
 PAAEAHARLK TQLPQQKLQL QEACMRKEKS VAVLEHQLVE VEETVRQFRG AVGEQLGKMR
 VFLAALEGSL DCEAERVGRG AGVALRRELG SLNSYLEQLR QMEKVLEEVA DKPQTEFLMK
 YCLVTSRLQK ILAEAPPPAR LDIQLPIISD DFKFQVWRKM FRALMPALEE LTFDPSSAHP
 SLVVSSSGRR VECSEQKAPP AGEDPRQFDK AVAVVAHQQL SEGEHYWEVD VGDKPRWALG
 VIAAEAPRRG RLHAVPSQGL WLLGLREGKI LEAHVEAKEP RALRSPERRP TRIGLYLSFG
 DGVLSFYDAS DADALVPLFA FHERLPRPVY PFDVWCWHDK GKNAQPLLLV GPEGAEA (SEQ ID NO: 147)

atgtcggtcg cgcccgccct cctgcaccag gagctgtcct gcccgctgtg cctgcagctg
 ttcgacgcgc ccgtgacagc cgagtgcggc cacagtttct gccgcgcctg cctaggccgc
 gtggccgggg agccggcggc ggatggcacc gttctctgcc cctgctgccg gcccccacg
 cggccgcagg cactcagcac caacctgcag ctggcgcgcc tgggtggagg gctggccag
 gtgcccaggg gccactgcga ggagcacctg gacccgctga gcatctactg cgagcaggac
 cgccgcgctg tgtcgcgagt gtgcgcctca ctccgctcgc accgcggtca tcgctcctg
 cctgcgcgcg agggccacgc acgcctcaag acacagctgc cacagcagaa actgcagctg
 caggaggcat gcatgcgtaa ggagaagagt gtggctgtgc tggagcatca gctggtggag
 gtggaggaga cagtgcgtca gttccggggg gccgtggggg agcagctggg caagatgcgg
 gtgttccttg ctgactgga gggctccttg gactgcgagg cagagcgtgt acgggtgag
 gcaggggtcg cttgcgccg ggagctgggg agcctgaact cttacctgga gcagctgcgg
 cagatggaga aggtcctgga ggaggtggcg gacaagccgc agactgagtt cctcatgaaa
 tactgcctgg tgaccagcag gctgcagaag atcctggcag aggcctcccc accgcccgt
 ctggacatcc agctgccaat tatctcagat gacttcaaat tccaggtgtg gaggaagatg
 ttccgggctc tgatgccagc gctggaggag ctgacctttg acccgagctc tgcgcacccg
 agcctggttg tgtcttctc tggccgccgc gtggagtgtc cggagcagaa ggcgcgcgcg
 gccggggagg acccgcgcca gttcgacaag gcggtggcg tgggtggcgca ccagcagctc
 tccgagggcg agcactactg ggaggtggat gttggcgaca agccgcgctg ggcgtggggc
 gtgatcgcg ccgaggcccc ccgcccggg cgccctgcac cgggtgccctc gcagggcctg
 tggctgctgg ggctgcgcga gggcaagatc ctggaggcac acgtggaggc caaggagccg
 cgcgctctgc gcagccccga gaggcggccc acgcgcattg gcctttacct gagcttcggc
 gacggcgctc tctccttcta cgatgccagc gacgcgacg cgctcgtgcc gctttttgcc
 ttccacgagc gcctgcccag gcccggtgtac cccttcttcg acgtgtgctg gcacgacaag
 ggcaagaatg cccagccgct gctgctcgtg ggtcccgaag gcgcccaggc ctga (SEQ ID NO: 151)

图 24

MRKEKSVAVL EHQLVEVEET VRQFRGAVGE QLGKMRVFLA ALEGS LDREA ERVRGEAGVA
 LRRELGSLNS YLEQLRQMEK VLEEVADKPQ TEFLMKYCLV TSRLQKILAE APPPARLDIQ
 LPIISDDFKF QVWRKMFRAL MPALEELTFD PSSAHPSLVV SSSGRRVECS EQKAPPAGED
 PRQFDKAVAV VAHQQLSEGE HYWEVDVGDK PRWALGVIAA EAPRRGR LHA VPSQGLWLLG
 LREGKILEAH VEAKEPRALR SPERRPTRIG LYLSFGDGV L SFYDASDADA LVPLFAFHER
 LPRPVYPFFD VCWHDKGKNA QPLLLVGPEG AEA (SEQ ID NO: 148)

atgcgcaagg agaagagtgt ggctgtgctg gagcatcagc tgggtggaggt ggaggagaca
 gtgcgtcagt tccgggggggc cgtggggggag cagctgggca agatgcgggt gttcctggct
 gcaactggagg gctccttgga ccgcgaggca gagcgtgtac ggggtgaggc aggggtcgcc
 ttgcgccggg agctggggag cctgaactct tacctggagc agctgcggca gatggagaag
 gtcctggagg aggtggcgga caagccgag actgagttcc tcatgaaata ctgcctgggtg
 accagcaggc tgcagaagat cctggcagag gctccccac ccgccctct ggacatccag
 ctgccaatta tctcagatga cttcaaattc caggtgtgga ggaagatgtt ccgggctctg
 atgccagcgc tggaggagct gaccttgac ccgagctctg cgcacccgag cctggtggtg
 tcttctctg gccgccgct ggagtgtctg gagcagaagg cgccgccgc cggggaggac
 ccgcgccagt tcgacaaggc ggtggcggtg gtggcgacc agcagctctc cgaggcgag
 cactactggg aggtggatgt tggcgacaag ccgcgtggg cgtgggcgt gatcgcgcc
 gagggcccc gccgcgggcg cctgcacgc gtgccctgc agggcctgtg gctgctggg
 ctgcgcgagg gcaagatcct ggaggcacac gtggaggcca aggagccgc cgctctgcgc
 agccccgaga ggcggccac gcgcattggc cttacctga gcttcggcga cggcgtcctc
 tccttctacg atgccagcga cgccgacgc ctcgtgcgc ttttgcctt ccacgagcgc
 ctgcccaggc ccgtgtaccc cttcttcgac gtgtgctggc acgacaagg caagaatgcc
 cagccgctgc tgctcgtggg tcccgaagg gccgagccct ga (SEQ ID NO: 152)

图 25

MRKEKSVAVL EHQLVEVEET VRQFRGAVGE QLGKMRVFLA ALEGS LDREA ERVRGEAGVA
 LRRELGSLNS YLEQLRQMEK VLEEVADKPQ TEFLMKYCLV TSRLQKILAE APPPARLDIQ
 LPIISDDFKF QVWRKMFRA LMPALEELTFD PSSAHPSLVV SSSGRRVECS GQKAPPAGED
 PRQFDKAVAV VAHQQLSEGE HYWEVDVGDK PRWALGVIAA EAPRRGRLHA VPSQGLWLLG
 LREGKILEAH VEAKEPRALR SPERRPTRIG LYLSFGDGV L SFYDASDADA LVPLFAFHER
 LPRPVYPFFD VCWHDKGKNA QPLLLVGPEG AEA (SEQ ID NO: 149)

atgcgtaagg agaagagtgt ggctgtgctg gagcatcagc tggaggaggt ggaggagaca
 gtgcgtcagt tccggggggc cgtgggggag cagctgggca agatgcgggt gttcctggct
 gcactggagg gctccttgga ccgcgaggca gagcgtgtac ggggtgaggc aggggtcgcc
 ttgcgcggg agctggggag cctgaactct tacctggagc agctgcggca gatggagaag
 gtcctggagg aggtggcgga caagccgcag actgagttcc tcatgaaata ctgcctgggtg
 accagcaggc tgcagaagat cctggcagag gctccccac ccgcccgtct ggacatccag
 ctgccaaatta tctcagatga cttcaaatc caggtgtgga ggaagatgtt ccgggctctg
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 cactactggg aggtggatgt tggcgacaag ccgcgctggg cgctgggctg gatcgcgcc
 gagggcccc gccgcggcg cctgcacgc gtgccctcgc agggcctgtg gctgctgggg
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 agccccgaga ggcggccac gcgcattggc ctttacctga gcttcggcga cggcgtcctc
 tccttctacg atgccagcga cgccgacgc ctcgtgccgc tttttgcctt ccacgagcgc
 ctgcccaggc ccgtgtacc cttcttcgac gtgtgctggc acgacaagg caagaatgcc
 cagccgctgc tgctcgtggg tcccgaagg gccgaggcct ga (SEQ ID NO: 153)

图 26

MSAAPGLLHQ ELSCPLCLQL FDAPVTAECG HSFCRACLGR VAGEPAADGT VLCPCQAPT
 RPQALSTNLQ LARLVEGLAQ VPQGHCEEHL DPLSIYCEQD RALVCGVCAS LGSHRGHRL
 PAAEAHARLK TQLPQQKLQL QEACMRKEKS VAVLEHQLVE VEETVRQFRG AVGEQLGKMR
 VFLLAALEGS L DREAERVGR AGVALRRELG SLNSYLEQLR QMEKVLEEVA DKPQTEFLMK
 YCLVTSRLQK ILAEAPPPAR LDIQLPIIS (SEQ ID NO: 150)

atgtcggctg cgcccgccct cctgcaccag gagctgtcct gcccgctgtg cctgcagctg
 ttcgacgctg ccgtgacagc cgagtgcggc cacagtttct gccgcgcctg cctaggccgc
 gtggccgggg agccggcgcc ggatggcacc gttctctgcc cctgctgcca ggccccacg
 cggccgcagg cactcagcac caacctgcag ctggcgcgcc tggaggagg gctggcccag
 gtgccgcagg gccactgcga ggagcacctg gaccgcgtga gcatctactg cgagcaggac
 cgcgcgctgg tgtgcggagt gtgcgcctca ctgggctcgc acccggttca tcgcctcctg
 cctgccgccc agggccacgc acgcctcaag acacagctgc cacagcagaa actgcagctg
 caggaggcat gcatgcgtaa ggagaagagt gtggctgtgc tggagcatca gctggtggag
 gtggaggaga cagtgcgtca gttccggggg gccgtggggg agcagctggg caagatgcgg
 gtgttcctgg ctgcaactgga gggctccttg gaccgcgagg cagagcgtgt acggggtgag
 gcaggggtcg ccttgcgccg ggagctgggg agcctgaact cttacctgga gcagctgcgg
 cagatggaga aggtcctgga ggaggtggcg gacaagccgc agactgagtt cctcatgaaa
 tactgcctgg tgaccagcag gctgcagaag atcctggcag aggtcctccc acccgcccgt
 ctggacatcc agctgccaat tatctcctga (SEQ ID NO: 154)

图 27

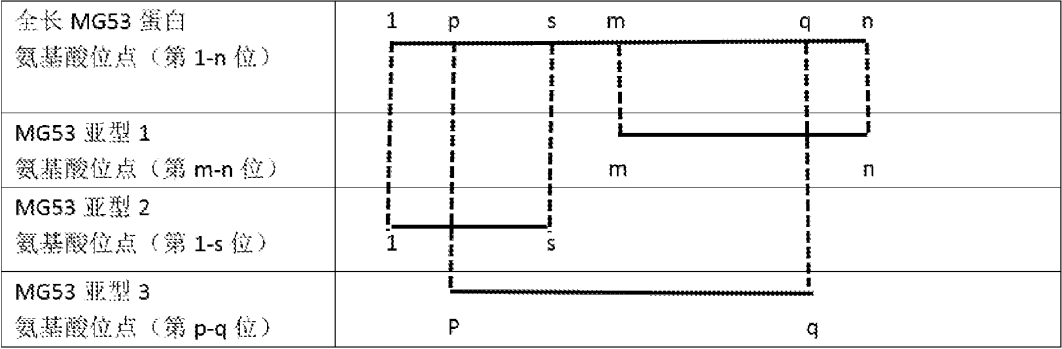


图 28