TLR5

Transcript ID： transcript4942_f3p0_3143

Annotation in NR: soluble toll-like receptor 5 [Miichthys miiuy] KR709249.1

ATGTGGACACTGAGTCTTCAGGCGGTTGTCATCTGTGTTTTCCTACAGGTGCCGGGGTGTT
TCCCATCATGCATCATAATGGGCTCTGTAGCCAGCTGTGCCTACCAAAACCTCCGCTGGAT
TCCTCCTCTCCCTCCCAACATCACCCACCTGTACCTGGAGATGAACCGCATTGGTGAGATC
AACTCCACCTCCCTGTCAGGCTTGGAGGAGCTACAGGAGCTCGACCTCGGAGCCCAGAA
TGTACCGCTTGTAATCAAGAACAACTCGTTCAGCGGTCAAAGACGTCTGAAGAGGCTGG
TGCTCAACGCCAACGTTGGCCTTCGTCTGGAGCCAAAGGCTTTTGTGGGATTGTCTGGTTT
GCGGAATCTCTACCTGGGTTACTGTTTGCTTAAGGAGTCCATCCTGAAGGAGAACTATCTA
GAGCCGCTGTCCTCCTTAGAGACTCTTGACCTGTTTGGTAACAACATAAACAAGCTGCAG
CCTGCAATGTTCTTTGTGAACATGACTAATTTGAAAGTTTTGAATCTCAAGTTGAACACAT
TTGACAAAATATGTGAGTCTGATCTTGTTGGTTTCCAGGGAAAGCACTTTGAGAAACTGA
ACTTGAACTCTGTTCACTTTAGGGATATGTCTAAAACATCTTTTGACTGGGAGAAATGTGG
GAACCCTTTTAGAGGAATGTCCTTTCAGTCACTCGACCTGTCCTACAATGGGTTAAGTTTG
GGTAAATCAAAGCAGTTTTTCAGAGCCATCGAGGGGACTAAGATCTCCCATCTTAAAATG
TCAGGACACATCGGTAAAGGATTTTCATTCAGCAATCTCCCTGATCCAGACCGCAACACG
TTTGAAGGCCTGACAAACAGTTTGATCCACACTTTGGATCTGTCTAAAAACAGGATATTTG
CATTGCAACAGGGGGTTTTTAGTCCGTTGAAAAAGGCTGCAATTATTGACATTTCCCAAA
ACCAGGTTAATGAGATACACAGAAATGCCTTTGAAGGTCTTCAGGGACATTTGAAAATGC
TCAACCTGTCACGCAACCTGCTGGGGGAAATCTATTCTCACACTTTTGCTTCTCTGACAAA
CCTGAAAGTGTTAGACTTGTCTTACAATCACATTGGGGTACTGGGTTATGGCTCATTTAGT
GGACTTCCCAACTTGAAAGCATTATATCTAACAGGAAACTCTTTGAAAGATCTCGGCTTCC
CTGCGTCTCTACCCAGCTTAGGTTACCTCATGTTGAATGATAATAAGTTGATGGCCTCGTC
GGTGGGTCTCTCATCGTTTGCCCGTAATGTTATGCATCTGAACATCCAGGACAACAGATTA
ACAAACCTGGAGGATGTTTACACCTTTCTGAATGAAATGAAACACCTTCAGTCTCTCTTCT
ACGGGGGAAACACAATCAGGTGGTGCACACTCAGTCGGCAAGTTTCAGGAATTGTTTTG
AATAATGTCCAAGTCCTTGATCTTCACAGCAGCTCACTGCAGTCTGTTTGGTCTCAGGGTA
AATGCCTGAATCTGTTTGACAATCTTGGACAAGTGACTGGTCTCAACTTGAGCTCCAACG
CACTACAATCTCTTCCTCAGGGCATTTTCAAGGGTCTCACCTCCATAGTGCAGATGGACCT
CTCATCCAACGCCTTGACTTATCTCCAGCCTGATGAACTACCCAAAAGTCTCAAAATACTC
AACCTCTCTAACAACTTCATAGCCTCCCCTGACCCTGCTGCTTTTCGTTCTCTCAGCCACC
TCAACCTAAATACCAACCGATTTCACTGCGATCACAACCTAAAGGGCTTCCTGACTTGGC
TGAACAAGACCAACGTAACCTTCCTGAGTCCCATTGAGGAGCTCAGATGTGAATTTCCTT
CCGGTTTCTATCATGTCTCTCTGCTAGATTACTCTGCTCAGGTCACAAAGCAGTAATTGTG
GGATTGTCTGGTTTG

Primer：

F: CGACCTCGGAGCCCAGAAT

R: CAAACCAGACAATCCCACAA

TLR2

Transcript ID： transcript5385_f2p0_3152

Annotation in NR： toll-like receptor 2 [Larimichthys crocea] KF318375.1

ATGTCCGATGAAGCCATTGTTAACTTCCTGGTGGTGTTTGATGGAGTGCCACTCACCTCCG
TTTGGGTGGATGGCATCATCCTGACTGGAGAGGGCAAGTGGGCACGAGCCAAATGGACC
AATCAGAAAAGCATTGATGAGTTCTTCTTACGAAACATTGTGGTGCTGGACGTCTGGAAG
TTTGTCTCATTGCTAGAGCTTGGATTTCTGCTGCATTATCCCAGGAAGGTGTCTGTCATAAA
CGGCAGGGTGTTTGTGATGCCCTGTCCTACATCCCGCCTGCTAGTGAACCTGCAGTACCTG
GACCTGTCCGACAACCTGCTGACTGAAATGACGCTGTCTGAGTCACTGTGTGACGGACAT
GGCACACTGAAGGACCTCCGGGTATTAAACATCAGTGGAAACGCTCTGAAGTCTTTGTCA
ACGATGAGCCGTCTGGTGGCAGGGCTCTCTAAACTCACCCACCTGGACATTAGCAGGAAT
GGATACAGCTCCATGCCCCAAGCCTGCTCCTGGCCCTCCACCCTCCGATACCTCAACATC
TCCAGGGCTAAACTTGAAACCATCACGCCCTGTCTACCCACAACTCTAGAGGTGCTGGAT
CTGAGCAACAATGATCTCAAAAGCTTAAATCTGTTCCTGCCTGCTCTGAGAGAACTCTAC
CTCTCTGGGAACAAGATTCAGAGTCTGCCTTCTGGATGGCTGCTTCCAAATCTGCAAATA
CTGACAATACAGTCAAACACCTTGAACATGTTTGGCCACTCAGACCTCCAGTCATACGAA
CGACTCCAGAACTTACAGGCGGGTCAGAACAAATTCGTCTGCTCCTGTGAATTTGTTGCT
TTCCTCCAGACGGACATTAAAGGTGAAAATGTGCAATTAACAGATGGCGAGGGGAGCTA
CATCTGCGACTCTCCTCTCTACCTGCAGGAGAAACCAGTGGGTCAAGTTCATCTCTCTGTT
GTGGACTGCCACCGGGTTTTGTTTGTGTCAGTGTGCTGTGGGGTGGCGCTATTTGTCGCCA
TTCTGTTGTGTATCCTGCTGTGGCGCCTCCACGTGTTGTGGTACCTAGAGATGACGTGGGC
ATGGCTCAAGGCCAAACGTAACTCCCGGCGAAGGCAGCGATGCAGAGAAAGAGAGGGC
TTGGAATCATTACTCTCCTTTGATGCCTTTGTGTCCTACAGTGAGCAGGATGCTAGCTGGGT
GGAAAACCTTTTGGTACCTGAGCTGGAAGAGCCAAGGGACAATGATGAAGAGTCTGTGA
ATCACCGGCCTTTGACTCTGTGCCTCCACAAGCGGGACTTCCTTCCAGGACACTGGATTG
TGGACAACATCATGAGTGCCATGGAACGCAGCCGGCGAACCGTCTTCGTCCTCTCTGAG
AATTTCGTCCAGTCCGACTGGTGCCGCTACGAGCTGGACTTCTCCCACTTCTGGCTCTTCG
ATGGGAACGCCGGCGGAGAGGCGATATTGATCCTCCTGGAACCGTTGTCCAAGGACGAC
ATCCCCAAACGCTTCTGCAAGCTGCGCAAACTTATGAGCTCCACCACCTACTTGGAGTGG
CCTCAGGAGGAGGAGAAGATTGGGGAGTTCTGGAGGAGTCTCCGCAAGGCTTTGAGAG
GAGAAGAGGAGGATTACTGA

Primer：

F:GGAGAAACCAGTGGGTCAAG

R:CAACAGAATGGCGACAAATAG

TCR

Transcript ID： transcript336_f2p0_5649

Annotation in NR: PREDICTED: transforming growth factor beta-2 [Larimichthys crocea]} XM_010752699.3

ATGAACCTGTGTATCGTCAGTCTCCTCCTAACTTTGGATTTAGCCACCGTGGCGCTCAGTT
TGTCCACATGCAGCACGCTGGACATGGATCAGTTCAAGAAGAAACGCATCGAGGCCATC
CGGGGGCAGATCCTGAGCAAACTGAAGCTCACCACCCCCCCTGAGGATTTTCCCGAGCC
CGAGGAGGTGTCCCGGGACATTGTCGCTATTTACAACAGCACCCGGGACCTGCTGCAGG
AGAAGGCGAACGAACGGGCGGCGACGTGCGAGCGGCAGCGGAGCGAGGAGGAGTATT
ACGCCAAGGAGGTGCACAAGATCGACATGCAGCCCTTCTATCCGTCAGAGAATGTTATCT
CTCCCACACACTTCAACCCTTACTTCAGGCGGCTGACGTTTGATGTGTCCTCCATGGAGA
AGAACGCCTCTAACCTGGTGAAGGCTGAGCTCAGGATCTTCCGTCTTCCAAACCACGGTG
CCCGAGTGTCTGAGCAGCGCATCGAGCTCTACCAGATTTTAGGGCACAAAGACCTGACAT
CCCCAACACAGCGATATATTGACAGCAAGGTGGTTCGAACACAAACAGAGGGAGAGTG
GCTGTCCTTCGACGTGACAGAGGCAGTGAGTGAATGGCTGAACCACAGAGATAGAAACA
GTGGATTCAAGATCAGCCTGCACTGCCCATGCTGCACATTTGTACCATCAAATAACTACAT
TATTCCCAACAAGAGTGAGGAGCTGGAGGCACGGTTTGCAGGTATTGATGACAGTTTTAT
CCATGGCGGTGATCTAAAGGTGTTTAAGAGGCGGCGGCACAGTGCACGGGCTCCACACC
TTCTCCTCATGCTGCTGCCTTCATACCGTCTAGAGTCCCAGTCCCAGTCCCAAGCCCCATC
CCAGTCCCAGCACAAGAACCATCGATCTAAGAGAGCCCTGGATGCTGCCTACTGCTCCA
GAAACGTTCAGGACAACTGCTGTTTACGGTCACTCTACATCGATTTTAAGAAGGACCTGG
GTTGGAGGTGGATCCATGAGCCAAAGGGCTATGAGGCCAACTTCTGTGCTGGGGCCTGTC
CATATCTGTGGAGCGCTGACACCCAGCATTCCAAGGTGTTAGGCCTATATAACACTATCAA
CCCTGAAGCATCAGCATCACCTTGCTGTGTCTCCCAGGATCTGGAGCCCCTTACCATCCTT
TACTACATCGGCAAGACCCCCAAAATAGAGCAGCTCTCAAATATGAAGGTCAAGTCCTGC
AAGTGCAGCTAG

Primer：

F: ATCTTCCGTCTTCCAAACCA

R: AGCCATTCACTCACTGCCTC

NF-kB

Transcript ID： transcript5497_f3p0_3102 (P65)

Annotation： Transcription factor p65 [Larimichthys crocea]　XM_019270684.2

ATGGCGGATGTGTATGGATGGAGCATGACCACACTGAACCCAGTCCAAACAGCGAACCC
CTTCATAGAGATCATCGAGCAGCCGAAGCAGAGGGGCATGAGGTTTAGGTATAAATGTGA
GGGACGTTCAGCCGGCAGCATCCCCGGAGAGAAGAGCAACGACACCACCAAGACTCAC
CCAGCCATCAAGGTGCACAACTACACCGGCCCACTGCGTGTCCGCATCTCACTGGTGACC
AAGAATGCCCCACACAAGCCGCACCCCCATGAACTAGTCGGGAAAGACTGCAAACATG
GCTACTACGAGGCCGACCTGCAGGAGAGGAGAATACACAGTTTTCAGAACCTGGGCATA
CAGTGTGTCAAGAAGAAGGATGTGAATGAGGCCATCACTTGTAGGCTGCAGACCAATAA
CAACCCCTTCAACATTCCCGAGGCGAAGGTGTGGGAGGAGGAGTTTGACCTGAATTCGG
TTCGGCTTTGCTTCCAGGCCTCCATCACTCTGCCTACAGGGGAGCTGTTTCCTCTGGAGCC
CGTGGTATCGCAGCCCATCTATGACAACCGCGCCCCAAACACAGCCGAGCTGAAGATCT
GCCGCGTCAACCGCAACTCTGGAAGCTGCAAAGGAGGGGATGAAATCTTTCTGCTGTGT
GACAAAGTGCAAAAAGAGGACATCGAGGTGCGTTTCTTCCAGGACTCCTGGGAGGGTAA
GGGCACCTTCTCCCAGGCTGACGTCCACAGACAGGTGGCCATTGTGTTCCGCACGCCGCC
GTACCGTGACACTAACCTCTCCGAGCCCATTAGAGTCAAGATGCAGCTCCGCCGGCCCTC
TGATCGCGAGGTCAGCGAGCCGATGGACTTCCAGTACCTGCCTGCTGAGCCAGATGAATA
CAGGCTGAGTGAGAAGAGGAAGCGTACAGGGGACATGTTCATGAGCCTGAAGCTGGGG
CCCATGCTGTCTAGTGTGTCCATGCCACAAGACCGACGACACATAAGCCCGGCAAGGAG
AACAGTTACAGCCAAGCCTCCATCAATGAACACACAAGCTGCGGCTGTGGTGCCCCCTG
GTGCCAGTGGAGCGAAACCCCAGCCCTCCTACTCATACAATCAGCCGGGCCAGCTCTTCT
CAGTGCAGACAAAGGTAGAGGCCTCCCCCGTCTCTGCAAGCCAAACGTGGAGGAACAT
GGAGAGCCTGAGCCTGGGCAACCAGCCCAAAGCCACTCCAGTGTCCAGCTTCACTATGG
GCACCACCACCTCTACCACGATTTCCACTGTCAACCAGGACCTCTCCACTGTCAACCTGT
CAGACCTTCATGAATTCTTCCCCAACATGTCCTCGGGCATGGTCCAGGAGCCAGCAGCAC
CTCAGGGAAGCACGGTCCCCTCACAGATGAGCGGCTCCTTCCCCCTCCAGGGCTCTCAGT
TCCGGGTGGACCCACCGGTTGTGGATGATGATATCCCAGAGTTCCCTAGCTTTTCTGACGT
CCAGGCTCCTGGCACACTGGAAAACCTAAACATGGATGACTTTGTGGACCTTCTGAACCC
CACCCTCATGAGCGAGAGCGGAAACAGCACCTCAATGTTGGTTCAAGCCTCGTGCCAGC
AAGCTGCCAATTCCAGCTCCTCTACCGCTGTCCAGAACAGCGGGGCATGCCAGAACTCTT
CTGAACCCGCAAGCAACCCAGGAAGCACCTGGATGAATTACCCCAACAGCATTGTCAAC
TTGCTCCAGAATGAGGGCATGATGGACATGGCGCCCAACAACAACCACCACCCCCCCGT
GCTGGACGAGTTGGATGAGCTGATGTCCGCTGACGAGGATCGTCTTATTTCTATTCTTCAC
AGTGGAAACCAAGCTAGGTTTGTGTCAGGACACCCAACTTAA

Primer：

F: GTGGGAGGAGGAGTTTGA

R: CATAGATGGGCTGCGATA

MHC-II

Transcript ID： transcript21289_f21p0_1175 (MHC2β)

Annotation： MHC class II antigen beta chain [Miichthys miiuy] KC439427.1

ATGGATTCATCCTTCATCAGCTTCTCCCTCCTCTTCATCAGCCTCTACACAGCAGATGGATT
CATGAATTCCAGAGTGGCCCGTTGTGTTTTTAACTCGACTGATCTGAAGAACATCGAGCTC
ATCGACTCGTTCTATTTCAACAAAGATGAGATCATCAGGTTCAGCAGCAGTGTGGGAAAG
TTTGTTGGATTCACTGAGTTTGGTGTGAAGAACGCAGAGGCCTGGAACAAAGATGCTTCA
CGTATGGCTCAGATGAGAGCTCAGAAGGAGACATACTGTCTGAACCATGTTGAGAATGCC
TACCAGGCTGCTCTGGATAAGTCAGTTAAACCGTCTGTCAGGCTGCACTCTGTGACGCCC
CCTGGTGGTCACCATCCCTCCATGTTGGTCTGCAGCGTCTTCGACTTCTACCCCCAACACA
TCAAAGTGAGCTGGCTCAGAGACGGACAGGAAGTCACCTCTGATGTCACTTCCACTGAT
GAGCTGGCAGACGCTGATTGGTACTACCAGATCCACTCTCACCTGGAGTACACGCCCAGG
TCTGGAGAGAAGATCTCCTGTGTGGTGGAGCACGCCAGCCTGAAAGAACCTCTGATTACT
GACTGGGACCCGTCCATGCCTGAGTCTGAGAGAAACAAGATCGCCATCGGAGCCTCAGG
ACTGATCCTGGGTCTGATCTTGTCTCTGGCTGGATTCATCTACTACAAGAGGAAGGCCAG
AGGAAGGATTCTGGTTCCCAGTAACTGA

Primer：

F: ATCAGCTTCTCCCTCCTCTTC

R: AATCCAACAAACTTTCCCACA

TNF-*α*

Transcript ID: transcript13245_f2p0_2096

Annotation in NR： PREDICTED: tumor necrosis factor alpha-induced protein 8-like protein 2 [Larimichthys crocea] XP_010735433.1

ATGGAGGCCTTCAGCTCAAAGGAAATGGCCATGAAGGCGCAGAAGAAGATCCTCAGCTC
GATGGCCACCAAAAGCTCTGTCCAAATGTTCATTGACGACACCACCAGCGAGATCCTGG
ATGAACTGTACCGCGTCTCCAAAGAGTACTCAGGTAATAAATCAGAGGCCCAGAAAGTG
ATCAAGAATCTGATCAAGATTGCTGTGAAGATCGGCGTGCTGTTCAAGAACAACCGCTTT
AGCACAGAAGAACTGGGAGTGGCCCAAGATTTTAAGAAGAAACTGCACCAAGGGGCCA
TGACGGCTATCAGCTTCTACGAGGTGGACTTTACCTTTGACAAGGCTGTGATGGAGGAAC
TCCTGACCAACTGCAGGGATCTGCTGCTGAAGCTGGTCAACAACCACCTCACCCCTAAAT
CCCACGGTCGCATCAACCACGTCTTCAACCATTACTCCGACCCAGAGCTCCTGACCAAAC
TGTACGATCCCAGTGGCCCATTCCGACCCCACCTTACTAAGATCTGCAAAGGACTTGACA
AACTGGTAGAGGAGGGGACAATATGA

Primer：

F: ATCGGCGTGCTGTTCAA

R: GCGACCGTGGGATTTAG

IL-1

Transcript ID： transcript10446_f2p0_2415

Annotation in NR: IL-1-related receptor [Collichthys lucidus] XP_019109540.1

ATGGCTGTGATTTTAGTCGCTGTCTTACTGGTGTGCACTGTTGAATGGGACAAGAGTTTATT
CGCAGCCGCTCAGTCCTGTGTGGATGAGAGCAGGTTTAAGGAGCAGGTGCTCTATGTGGG
GCAGCAGTGGCCTCCATATCGGCTGAACTGCCCTCTGGAGCTTGTCCAGTCCCAGCTCAA
GTTGATCTGGCAGAAGGACTGTCAGCAGCTCCGCACCCAGGAAGGGAAGGCCTACGTGG
AGTTTGCCAGCCTCAGCTTCCAAGACCAAGGGAATTACACATGTGTGCAACAGGGCAAC
AGCACAACCTCATTCACAGTGCGTCTCATAGTTAAAGAGTCCCAGTGCTCCAAAGCCCCA
GAGTTTAAACCAAATGGGGGTCCGACCAGACTCTGGAGGAATGTGGGATCCACAGTGAT
ACTGAACTGCTCTGCTCTCCTCTTCTGGGACCCAAAAGAGAAGCAATGTGACACCACGCT
GCAGTGGAGTAAAGATAGCCAACCCCTCACCAATCACACACTTTACAAGCAGAATATCTC
CTCATGGTCTCCTGTTGCCGACCAGCTGATGGTAAACAGTCTGCTGGAGATCACCCTCAG
GGAGCTGGACGATTTTGGGCTCTACTGTTGTGCAGTGAGGAACATTTCCTCTGAGTTTAGC
CTACACGCTTCAAGCGGCCCCAACCATACGGCTGCTGTTATTGCAGCCATTATCCTCCTCC
TGTTACTGAGTATAGCTGCTGTCGTGTACTCCAGGTGTCACCTAAATATCAAACTGTGGTA
CAGAAACACCTATGGAGACTATGAACTCAGTGATGGTAAATTATATGATGCCTATATCTCC
TACGTGAACAATGACCATGACAGGAAGTTTGTCAACTTTATTCTCAAACCTCACCTGGAG
AATAAAAATGCATACAAGGTTCATCTCAATGATAACGAAATCCTACCTGGCTCAGAACCT
TCTGCGGAGCTGCTCATGAACATAAGTCGTTCTCGGCGTCTGATTGTGGTGCTTTCTTACG
CTTACCTTGAGCAGGACTGGTGCTGCAACAACTTCAGACAGGGCCTTCTGCACTTGTTGG
AATTATGTAAGAGTCCCATCCTCATCGTGTTGGAGGGTCAGTCCAAACGCATGAGGCCTG
AGATCAAGCAGCAGCTCAGTGAACACCAGCACCGCCTCACTGTACTTACCTGGAGGTAC
AACTCCGTGACTCCCTCCTCAGTCTTCTGGAAGGAGCTGGCCTTAGCGATGCCTCGCAAA
GTCGTCTTTCGCAGTGAGTCTGTAGGTGACCCTCAGACTATGCTACAAGATGACAAGGAC
CCCATGCTGACCCTCAACCCCGACTACCTAGACTGCCGCTCAGACACAGACCCTGCTGG
AGATCTAGGGCTTCGCCTACCTGTGTACAAGGCCATGGCCTGTAAAGCCCCTGTCCTCCCT
GCTGCTCCCATGACTGCAGCTGAGCCCAAACCTGTGGACATCGACGTGTCGGACCTGGG
CTCACGCAACTATGGCGCCCGCTCAGACTTCTACTGCCTGGTCACTGAGGACATATGA

Primer：

F: GTTCTCGGCGTCTGATTGTG

R: GTGAGGCGGTGCTGGTGTTC

IL-6

Transcript ID： transcript2470_f2p0_3891

Annotation: Interleukin-6 receptor subunit beta [Larimichthys crocea] XP_010747226.1

ATGGAGTCTGCCAGACTGTTCCAGCTGTTGCTGTTAGCCTGCCTAGCCTTTGCTCTACCTG
CCCGAGGAGAAAATCTCAGTCATTTGGTGATAGTGCCACAGTCTCCAGAGCTTGAGATTG
GAACTAACTTTATGGCTACATGCATGATCTTCAACACATCTGAAGTTACAGCAGACGACC
TCTACTGGAAGCTGTCGAAGACTATTATACCCAAAGAGCAATACACAAAGATCAACAGCT
CAGCTCTCAATGTCACTATCCCCATCACCACTGAGAGCTCTGAATTGCTGTATTGCTTCTG
CAAGGGAAAGTCAAACTATGTTTACCTGAATCCAGGCAAATTTGTGCATGGGATCTTCCT
GAAGAAAGGCTATCGCCCAGGGAAGCCTGAGAATTTTTCCTGTATGGCAGTTCAGGATAA
AACAGTCATCTCTGAAATCATCATGTGTAAGTGGGACCCAGTAGGACGTCAAACCACGG
ATGTCCCTACAACGTACACACTGAATGTTAAAGTCACCCCCAGTGATATCAAGAATAAAT
CAACAAGTGAAAATAGTATCCAAGTGGCTCTGGAGGTTTTCCCTTATCATATGACTATGGA
GATCTGGGTGGAGGCACACAATAAACTGGGAAGAATAGAGTCTGAGCATCTGAAAGAA
GATGCTGGCTGGTTTGTGAAAACGAACCCTCCATCAAATGTCAAAATCATTTCAGAGAAG
AGTTTTCCCATCTCCCTTCTCATAAACTGGACTCATCCAATAGCTGAAGAATATCTGAAAT
TAATATATAAAATCAGATTCTGCCCACAAGGATCTCAAAGTTGGACTGATGTACCTCTTGT
GGACACTGCCAAGCACATACAGTCCTTCAGACTACAGAACCTTCAGCCAGACACTGTTTA
TATTGTTCAGGTGTCCTGCAAAAATGCCAGACTTGGCCATGGTTACTGGAGCAACTGGAG
TACCAATGCAACCAGTAGAACACCAGAGGACAAACCTTCCAGTAAACCAGAGTTATGGA
AATTCATTTCTGATGGTGACAACATGAACGAACAACAAATGCAGATTATTTGTAAGGATC
CTGTGTTCGCCAACGGAAAGATAAACAGATTTGAAATGAAGATTCAAGACCTAACAGAC
AAAGGCAAGAATGGGAGTTGGACATGGGAGAGTATTCCAGTCAACAGGTCAGAGGCCA
ACAGCAGGTCTAGTCAGCACATCCTGAAGGAGATTCACCTGGCTGACAAGAAGTCCATC
AAAGTGTATGTCAGCGCCTTTAATTCTGCAGGAAAATCTCCTGAGGCAGTGTTAGTCATCC
CTGAAAAAGAGCTTCCCCCAGTGGAAGAACTGAAGGTGTGGCCCCATGAAGGCAAGCT
GCAGCTGGAATGGAAACCCCCCAAAGGTCGCTCTGTCCCAGAGTATGTGGTGGAGTGGA
TTAGTGGTGATCAGAGAGGCTGGCAGAGGGAAAACAGAAACACCAGACACACTTTCATT
AAAGGCACCCTTGAGAAGTTTGTTTGCTACAAAGTATCTGTGTATCCAATCTACTCTAATG
GATATATTGGCAAGCCGGCAAGTCAAGAAGCCTTTCTGGAGCAAGGAGTTCCATCAGATG
GCCCGACCATTACACTGATTGCTAAAGGATCTAACAATGCAGAGCTGGAGTGGTCAGAG
ATTCCCCAACACATCCGACGAGGCTTCATCACACACTACACGATATACTATAAAAGCGGG
ACTGAAACACATGCCATAAAAGTGCCAGCTAACGTCACCTCATACGTTCTGAGGTCATTG
TCACAGAACACCAAATATGACACTTGGATCGAAGTTTCAACCATCAAAGGGTCAGCCAA
AGGCTATAATCACTCATTCACTACTCTGAAATATGCACCCGGAGAGATCGAGGGCATCGT
GGTAGGAGTGTGCCTTGGCTTTCTCTTTATTGTCCTCATGACCATGCTGCTGTGTATCTACA
AAAAAGATGTGATCAAGAAGAATTTCTGGCCCTGGATTCCAAACCCTGGAGAGAGCACC
ATTGGAAACTGGTCTCCTGATTATCCTCTTAAAGCAGAGACACCAAAGGAAAACTGTGTA
TCTGGCATCAGTGTGCTTGATGTGGATGTGTGTGATGGAAAGTGTGTGTTTGAGGAGGAC
AAGGCCAGTCTTCCTCTAAAGAAGGACAAGTATCTGTCTGAGGAGCACAGCAGCGGCAT
TGGTGGCTCCTCTTGCATGTCTTCACCTCGCCAGAGTGTGTCTGACAGCGATGAGGGCGG
CGACATGGCTGACACCACAGCAAGCACTGTTCAGTATTCGTCGGTGGTGGCCTCCAATGG
TTACAAGGGTCAGACCCCAAGCTCCCAACCTCAGCAGGCCATTTTTTCACGGTCTGAGTC

CACGCAGCCTCTTCTGGATTCTGAGGAGAACCCAGACATGTTGCTGCAAGAGGGCAGCA
GACAGTCCCAGCGTTTCCCTCGACAGGCCTGCTTTACACACACTGCACGGAACAAAAAC
AGCACCGACCCTGCTGACTCCAACCAGCTGGAGATGGAGCAGCAGGAGATGGTGGAGC
CTTTGGACTTCTGTCCTTTGGAAGAGGACTCTGAGCAGACAACACCTGCTGACAGTCATT
CAGCTGACTGGCTGTCAGAAGCACCAATCTCCAGCTACATGCCTCAGCTGGGTGGTTACA
GGCCACAGTGA

Primer:
F: GCCCAGGGAAGCCTGAGAAT
R: GGGACATCCGTGGTTTGACG

BH3

Transcript ID： transcript400_f3p0_5509

Annotation in NR: bcl-2-like protein 11 [Larimichthys crocea] XM_010739224.3

ATGCATCATCTATCCAGACCACCAAACCGGTCCGATGGCTCGACCGCAGTAGCGGGAAC
ACAAGGGAGCGGAGGAGATCCATCACCCGCCGGTGCTGCTGGAGCCTCAGCGCAAACC
TCCCGTTTAGACAACGGCGGCGAGCGGAGCTTTGGCCACAGCAACTCCACCGGAGGAGG
AGAGCCGGACTCGCCGTCCTGGTACAGAACCAAACCCATCTCCCCTCTCGACAACAGCC
TAGGCGTGTTTCAGACGAGGACGATATTCCACCTCCCACGCCGCGCCTCCAGTGGATATTT
CTCCTCGGACGGCGACTCGCTGCCAAGCTCTCCGCACACCCCGAGACCAGTGACGGCTG
ATAAAGCCACGCAGACTCCGAGCCTCACCGGCCAGGTGGTGCAACACGCCGTACTGCGC
ATGACAGAGGCGCCCGGCGGAGAACCGGGGACGCACCAGCAGCACGGACATTCTCCCA
GCCCCTCTAGCATGCGGCCACGAAACGCAGCCGGGGACATGCAGACGGAGGTTATCGGA
CGAGAGCTCCGACGCATTGGAGATGATTTCAACAGACTTCTTCTCTTAAGGGGGATGGCC
AACCCAAGACGGGTTGTGATCCATCCGAACCCACTGCCGCACATCCACCAGGAACCCGC
CATGCTGCTCTGCATGGGCCTCCTGCTCCTTCTGATTGGACGGATAATCTACTTGCAGGGC
AATATGGACAGCCCAGACCACTCTCAGGTTTAG

Primer：

F: CCCAAGACGGGTTGTGAT

R: CCATATTGCCCTGCAAGTAG

Casp8

Transcript ID： transcript14011_f8p0_1992

Annotation in NR： caspase 8 [Totoaba macdonaldi] KY689036.1

ATGGATAGGGTGATGCTGTCCCGAATAGATGAGGAGCTTGAGTCCTCGGAGGTGGCCGCT
CTCTGCTTCTTGTGTCACGATGTCGTCAACAGGAAGCGCCTCGAAGGGGTCATGGATGCA
AAAGCGCTGTTCTTGAGACTAGAAGAAAGAGGTCTGCTGGATAACCACATCTTCCTTTCT
CGGCTGATTAACACCATCCGGCGAGCAGATCTCCTCAGCCTTCTGGAGACAGACAGCAG
GCAACCAGTAGAAACTGATGCAAATCCTTTGCTGTCAGAATACAGGGTGATGCTGTACCG
TATATATGAGGACATGACTCAGGAAAACCTTGACAAGATGAAGTTTCTGTTGAGTAGCAA
GCTGGGCAGAAGACAGATTGAGGCATGCAATACAGCCCTGGATGTGTTTGCTGAGATGG
AAAAGGCTTGTTTACTGTCAAAAGACAAACTTGATGAGCTGCTTGCAGTACTGCAAGAGT
TTGATCAACAGCTGGCATCGACTGTACGGCTCCACATGCAAAATGAGTGCAGAATGAGG
CCAATCCCACCGGCTCATGTCAGCATGGATGACCAGAGGGTCATCAGAATCTGTCAGGA
AAGACCACAACCTGAGACACAGCCAAGCGATGCAGGACAGACTGTTTACACTGATGCA
GAACTAAACTTGTCTCCTTCAGATCAGACAGAGTACTACGCCCTGATACATAACCCTCGT
GGTCAGTGTGTGGTTTTCAACAATGAGAAATTCCAGAATGTAAACCTGAAAGATAGAGG
AGGGACTCAGCAGGATGAAAAGGTTCTGTGTAAAGTCTTCAACCGCCTTGGCTTCACTGT
GGAGGTGCACAACGACTTGACTGCAGCAGAAATAAGACACAAAATAAAACAGCTGGGC
AGTAGGAATTTTTTGAATGATGATGTCTTGGTGGTATGCGTGCTTTCCCATGGAGAAAAGG
GATGCATCTTTGGGACTGATGAGAAGCCGGTGGACCTGCGAGAACTGACAGAGCCCTTT
ACGAGTGGGAATGCTCCCACCTTGGCAGGGAAGCCCAAGCTGTTCTTCATCCAAGCGTGT
CAGGGAAACAACTACCAGATGGGAGCTGTGCCATGTCCACCGAGGCCAAGACAGGAGC
TGGACAACAGGGAGAACCGACTGGAGGAAGATGCAGGTCCTGTGCGTGGCGAGACGAT
ACCTTCGGATGCTGACTTCCTGCTGGGCATGGCCACCGTGCAGGAGTGCAAATCGTTTCG
AAACACTTCCACAGGCTCCATCTACATCCAGCAGCTGTGCAGCCAGCTGATGAAGTCAG
CACAAAGCCTGGAAAATGATGATATACTCACTGTCCTGACACGTGTGAACAGAGAGGTC
AGCAAAGGAGAATATTTAAGCTACAAACAGATGCCAGAGCCCAAGTACACCCTCACCAA
GAAGCTCGTCTTCAAATGTGTATGA

Primer：

F：GGAGAACCGACTGGAGGAA

R：TGTAGATGGAGCCTGTGGAAG

Bcl2

Transcript ID： transcript10299_f7p0_2378

Annotation： apoptosis regulator Bcl-2 [Larimichthys crocea] XM_010729997.2

ATGGCGAACGAGCGTAACCGCAGCATTGTGGAAAGTATATCTGCCATAAACTCTCCAAAC
AGGGCTACGTGTGGGGGTTTGACGATGTCCGGGATGAAGATGCTGCTAATAACGGGTCAA
TAGTTGCTCCTCCACCGACTTTAGTCCGCCGGTGCCGTGAGGCCAGCACCGGGCCTGACA
CCGAGAGCATCCCCCACCTCTGCAAACGTCTCCCCCAGTCCGACCCGCACGCCGCCATC
CACAGAGTCCTGCGCGAGGCTGGAGATGAACTTGAAAGACTGTACCAGCCAGACTTCAC
GGAGATGTCACGGCAGCTGTATCTCACCTCCACCACGGCGCAGAGGAGATTCGCCGAGG
TGATAGACGAACTGTTCCGGGACGGGGTGAACTGGGGCCGGATTATCGCTTTCTTCGAGT
TCGGGGGCACGGTGTGCGTGGAGTGCGTGGCCAAGGAGGAGATGGCACCGCAGGTGGA
CAACATCGCGGAGTGGATGACGGAGTATTTAAATGGACCTCTGAACAGCTGGATACAAG
ATAACGGGGGATGGGATGCCTTTGTAGAGCTGTATGACAGACAGAGGGACTCCGTCTTCA
GTTGCTCCTGGCCCTCCATTAAGACGGTCTTCGGTATGGCTGCGCTCGGGGCAGCCAGCC
TCACCATCGGGGCATACCTTACACAGAAGTGA

Primer：

F: CGGGTCAATAGTTGCTCCTC

R: CCGTGGTGGAGGTGAGATAC

Bax

Transcript ID： transcript6117_f4p0_2977

Annotation in NR： apoptosis regulator BAX [Larimichthys crocea] XM_010749348.3

ATGGCTGACAGTCGAGAAGAGGAGAAAAAGGCAGACCGGGAGCCTGAAGGCGCCACG
GGTGGGGAAGATGTCATCGATGATCCCATTCTGGAGCAAGGAGCAGTAGTCCTCAGAGG
GTATGTGATTGAACGTATAAACACAGCGGAGCCCAGTCTGCATGTCTCCTCTGAAGACCT
GGGAGGAAGGCCAAACGAGCAACAGGATCCACAAATCAAAGAGGTGGTGGAACATCTG
CTCAAGATTGCAGAAGAGCTGAACAGGAACGCCGAGCTCCAACAATTGATCAACCAGGT
TCAGAGCAACTGTGCTCAAGACATCTTCATGAAGGTGGCCAGGAGCATCTTTGCTGATGG
CATCAACTGGGGCCGAGTGGTGGCTCTCTTCCATCTGGCCTACAGACTCATATACAAGGC
ACTGACCACCAACCACCTAGAGAACATCAGAACAGTCATCAGGTGGGTTCTTCAGGTCA
TCAGAGAGCAGCTCTACTCCTGGATTGTACAGCAGGGAGGCTGGGAAGGGGTGATCCGA
GGTTTTTCTCGGTGGAGGACAGTAGCTGTAGTAGCATCAATAGTATTGGTGGCAACTATTG
TTTACTACAGGAAGACACGCTGA

Primer：

F：GAGGTGGTGGAACATCTGCT

R：TTGGTGGTCAGTGCCTTGTA

Casp3
Transcript ID： transcript10942_f11p0_2044
Annotation: caspase 3 [Miichthys miiuy] KF738809.1

ATGTCGGCTAACGGACCCGGACCTGGAGGAGACTGCACAGACGCGAGGAGAGGCGATG
GACAAGAGTCGGAGCCGTCTTCGTCTGCTGCCGCCACCAAGCCGGGCTCCCACAGCTTC
AGATACAGCCTGAACTATCCCTGCATTGGCCAGTGCATCATCATCAACAACAAGAACTTT
GACAGGAGTACAGGCATGAATCAACGAAATGGTACAGATGTAGATGCAGCCAACGCGAT
GAAAGTGTTTGCAAAGTTGGGTTATAAAGCGAAGGTTTACAATGACCAGACAGTCGACC
AGATGAGACAGGTTTTAACTTCTGTTGCGAAGGAAGATCACAGCTGCTACGCCTCGTTTG
TCTGTGTTCTGTTGAGTCATGGAGATGAGGGAGTGTTCTTTGGTACGGATGGCTCTATAGA
GCTGAAGTACCTAACATCACTGTTTCGAGGCGATCGCTGCAAATCACTGGTGGGAAAGCC
CAAACTCTTCTTCATCCAGGCTTGCCGAGGCACAGATCTGGATGCAGGCATTGAAACCGA
CAGTCCTGATGATGGCACTACAAAGATCCCTGTGGAAGCTGACTTCCTCTATGCTTTCTCC
ACAGCCCCAGGTTACTACTCATGGAGGAATACTATGACCGGATCCTGGTTCATGCAGTCA
CTGTGTGATATGATCAGCAAGTATGGAAAAGAAGTGGAGCTCCAGCACATCATGACACG
AGTGAACCACAAGGTGGCAGTAGAGTTTGAGTCTGTCTCCCACTCACCAGGCTTTCATGC
AAAGAAACAAATCCCATGCATTGTGTCAATGCTGACCAAAGAGATGTATTTTTCTCCTTG
A

Primer：
F: CTGCTACGCCTCGTTTGTCT
R: TCAGCTTCCACAGGGATCTT

β-actin
Transcript ID： transcript11384_f3p0_2155
Annotation in NR： actin, beta [Coregonus maraena] HE984309.1

ATGAAAATCGCCCGCACTGGTTTGTTTGACAAACGGATTCCGGTATGTTGCAAAAGCCGG
ATTTCGCCGGGAGAACGGACCGCCCCCTCGTGCTGTCTTTCCCCATCCATCGTCGGTCGCC
CCCAGGCAATCAGGGGCGTGGATGGTTTGGTATGGGGCCCAGAAAGGGACAGCTATGTT
TGGTGATGAAGCCCAGAGCAAGAGAGGTATCCTGACCCCTGAAAGTACCCCATCGAGCA
CGGTATTGTGGACCAAACTGGGATGACATGGAGAAGATCTGGCAATCACACCTTCTACAA
ACGAGCTCAGGAGTTTGCCCCCTGAGGGAGCAACCCCCGTCCTGCTCACAGAGGGCCCC
CCCTGAAACCCCAAAAGCCAAACAGGGAGAAGATGACCCCAGATTCATGTTTCGAGACC
TTTCAAAACACCCCTGCCATGTTACGTTTTGCCAATCCCAGGGCTGTTGCTGTCCCCTGTA
TGCCTCTGGTCGTACCACTGGTATCGTCCATGGGACTCCGGTGATTGGTGTGGACCCCACA
CAGTGGCCCCATCTACGAGGGTTTACGCCCCTGCCCCCACGCCATCCTGCGTCTGGGACT
TGGGCCGGCCCGCGAACCTCACAGACTACCTCATGAAGATTCCTGGACAGAGCGTGGGC
TACTCCTTCACCACCCACAGCCGAGAGGGGAAAAATCGTGCGTGGACATCAAGGAGAA
AGCTGTTGCTACGTCGCCCCTGGGACCTTCGAGCAGGAGATGGGGCCACTGCTTGCCTCC
TCCTCCTCCCTGGAGAAAGAAGCTATGAGCTGCCCTGACGGGACAGGTTCATCACCATTG
GCAATGAGAGGTTTCCGTTTGCCCCAGAGGGGCCCTCTTCCAGCCTTTCCTTCCTCGGTAT
GGGAAATCTTGCGGAAATCCCACGAGACCACCTACAAACAGCAATCATGAAAGTGCGGA
CGTCGACATCCGTAAGGACCTGTATGCCAAACACCGTGCTGTCTGGAGGTACCACCATGT
TACCCCGGCAATCGCCGACAGGATGCAGAAGGAGATCCACAGCCCCTGGGCCCCCATCC
CACCATGAAAGATCAAGATCATTGCCCCCACCTGAGCGTAAAATACTCTGTCCTGGATCG
GAGGGCTCCATCCCTGGGCCCTCTCTGTCCCACCTTCCAGCAGATGTGGATCAGCAAAGC
AGGAGTACGATGAGTCCGGCCCCCTCCATCGTCCCACCGCAAAATGCTTTCTAAAACAGG
GACTGTTTTCCTCCTACCCCCCTCCCCAAACCAAAATGCCCCAAACAACTTTCAGCTCTGT
GCAAAAAACAAACCACACACCACCACACATTTTCTCATACACACTCAGGCGCAGAAGCC
TAGATGGAACCAAACTCAATTGGCATGGCTTCAGTTATTTTTTTGGCGCTTGGACTCAGGA
TTTTTTAAAAAAAAAACTGGAAACGATGAAGGAGACAGTAAATGTTTTTTTGGCTAGGTT
TTAA

Primer：
F: AAATCGTGCGTGGACATCA
R: CCGTCAGGGCAGCTCATAG