

**Supplementary Table S1 The sequences of TP53, Survivin, and hTERT**

<p><b>P53</b></p>
<p><b>DNA sequence:</b></p> <p>ATGGAGGAGCCGAGTCAGATCCTAGCGTCGAGCCCCCTCTGAGTCAGGAAACATTTTCAGACCTATGGAAACTACTTCCTGA  AAACAACGTTCTGTCCCCCTTCCCGTCCCAAGCAATGGATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTG  AAGACCCAGGTCCAGATGAAGCTCCAGAATGCCAGAGGCTGCTCCCCGCGTGGCCCCGCACCAGCAGCTCCTACACCGGCG  GCCCTGCACCAGCCCCCTCCTGGCCCCGTGTCATCTTCTGTCCCTTCCCAGAAAACCTACCAGGGCAGCTACGGTTTTCCGTCT  GGGTTCTTGCACTTCTGGGACAGCAAGTCTGTGACTTGCACGTAATCCCCTGCCCTCAACAAGATGTTTTGCCAACTGGCCA  AGACCTGCCCTGTGCAGCTGTGGGTTGATTCCACACCCCCGCGCCGACCCGCGTCCGCGCCATGGCCATCTACAAGCAGTCA  CAGCACATGACGGAGGTTGTGAGGCGCTGCCCCACCATGAGCGCTGCTCAGATAGCGATGGTCTGGCCCCCTCCTCAGCATCT  TATCCGAGTGAAGTAAATTTGCGTGTGGAGTATTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTGCCTATGAGC  CGCCTGAGGTTGGCTCTGACTGTACCACCATCCACTACAACATACATGTGTAACAGTTCCCTGCATGGGCGGCATGAACCGGAGG  CCCATCCTCACCATCATCACACTGGAAGACTCCAGTGGTAATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTTGTCCTG  TCCTGGGAGAGACCGGCGCACAGAGGAAGAGAATCTCCGCAAGAAAGGGGAGCCTCACCACGAGCTGCCCCAGGGAGCACTA  AGCGAGCACTGCCAACAAACACCAGCTCCTCTCCCAGCCAAAGAAGAAACCACTGGATGGAGAATATTTACCCTTCAGATC  CGTGGGCGTGAGCGTTCGAGATGTTCCGAGAGCTGAATGAGGCCTTGAAGTCAAGGATGCCAGGCTGGGAAGGAGCCAGG  GGGAGCAGGGCTCACTCCAGCCACCTGAAGTCCAAAAAGGGTCAGTCTACCTCCCGCCATAAAAAACTCATGTTCAAGACAG  AAGGGCCTGACTCAGAC</p>
<p><b>Amino Acid Sequence:</b></p> <p>MEEPQSDPSVEPLSQETFSDLWKLLPENNVLSPPLSQAMDDLMLSPDDIEQWFTEDPGPDEAPRMPPEAAPRVAPAPAAPTPA  APAPAPSWPLSSSVPSQKTYQGSYGFRLGFLHSGTAKSVTCTYSPALNKMFCQLAKTQCPVQLWVDSTPPPGTRVRAMAIYKQS  QHMTEVRRCPHHERCSDSDGLAPPQHLIRVEVNLRVEYLDDRNTFRHSVVVPYEPPEVGSDDTIIHYNMNCSSCMGMNRR  PILTIITLEDSSGNLLGRNSFEVRVCACPGRRRTEENLRKKGEPHHELPPGSTKRALPNNTSSSPQPKKPLDGEYFTLQI  RGRERFEMFRELNEALELKDQAQAGKEPGGSRAHSSHLKSKKGQTSRHKLMFKTEGPDS</p>
<p><b>Survivin</b></p>
<p><b>DNA sequence:</b></p> <p>ATGGGTGCCCCGACGTTGCCCTGCCTGGCAGCCCTTTCTCAAGGACCACCGCATCTCTACATTCAAGAAGTGGCCCTTCTT  GGAGGGCTGCGCTGCACCCCGAGCGGATGGCCGAGGCTGGCTTCCACTGCCCCACTGAGAACGAGCCAGACTGGCCC  AGTGTCTTCTGCTTCAAGGAGCTGGAAGGCTGGGAGCCAGATGACGACCCCATAGAGGAACATAAAAAGCATTGTCGGGT  TGCGCTTCTCTTCTGCAAGAAGCAGTTGAAGAATTAACCCTTGGTGAATTTTGAAGTGGACAGAGAAAGCCAAAGAA  CAAAATTGCAAAGAAACCAACAATAAGAAGAAAGAAATTTGAGGAACTGCGAAGAAAGTGCGCCGTGCCATCGAGCAGCTGG  CTGCCATGGAT</p>
<p><b>Amino Acid Sequence:</b></p> <p>MGAPTLPPAWQPFKLDHRISTFKNWPFLEGCACTPERMAEAGFIHCPTENEPDLAQCFFCFKELEGWEPDDDPIDEEHKKHSSG  CAFLSVKKQFEELTLGEFLKLDREERAKNKIAKETNKKKEFEETAKKVRRAIEQLAAMD</p>
<p><b>hTERT</b></p>
<p><b>DNA sequence:</b></p> <p>ATGCCGCGCGCTCCCCGCTGCCGAGCCGTGCGCTCCCTGCTGCGCAGCCACTACCGCGAGGTGCTGCCGCTGGCCACGTTTCGT  CGCGCGCTGGGGCCCGAGGCTGGCGGCTGGTGCAGCGGGGACCCGCGGCTTTCCGCGCGCTGGTGGCCAGTGCCTGG</p>

TGTGCGTGCCCTGGGACGCACGGCCGCCCCCGCCGCCCTCTCCGCCAGGTGTCCTGCTGAAGGAGCTGGTGGCCGA  
GTGCTGCAGAGGCTGTGCGAGCGCGGCCGAAGAACGTGCTGGCCTTCGGCTTCGCGCTGCTGGACGGGGCCCGGGGGCC  
CCCCGAGGCCCTTACCACCAGCGTGCAGCTACCTGCCAACACGGTGACCGACGCACTGCGGGGAGCGGGGCGTGGGGG  
TGCTGCTGCGCCGCTGGGCGACGAGTGTGTTACCTGTGGCAGCTGCGCGCTCTTTGTGCTGGTGGCTCCAGCTGC  
GCCTACCAGGTGTGCGGGCCCGCTGTACCAGCTCGGCGTGCACCTCAGGCCGGCCCCGCCACACGCTAGTGGACCCCG  
AAGGCGTCTGGGATGCGAACGGGCTGGAACATAGCGTCAAGGAGCGCGGGTCCCCCTGGGCTGCCAGCCCCGGTGC  
GGAGGCGGGGGCAGTGCCAGCCGAAGTCTGCCGTTGCCAAGAGGCCAGGCGTGGCGCTGCCCTGAGCCGGAGCCGAC  
CCCGTTGGGACAGGGTCTGGGCCACCCGGGACGCGTGGACCGAGTGACCGTGGTTCTGTGTGGTGTACCTGCCAG  
ACCCGCCGAAGAAGCCACCTCTTTGGAGGGTGCCTCTCTGGCAGCGCCACTCCACCCATCCGTGGGCCGCCAGCACCG  
CGGGCCCCCATCCACATCGCGGCCACCAGTCCCTGGGACACGCTTGTCCCCGGTGTACGCCGAGACCAAGCACTTCCT  
TACTCTCAGCGACAAGGAGCAGCTGCGGCCCTCTTCTACTCAGCTCTCTGAGGCCAGCCTGACTGGCGCTCGGAGGCT  
CGTGGAGACCATCTTTCTGGGTTCCAGGCCCTGGATGCCAGGACTCCCGCAGGTTGCCCGCCTGCCACAGGCTACTGGC  
AAATGCGGCCCTGTTCTTGAGCTGCTGGGAACCACGCGAGTCCCCTACGGGGTGTCTCAAGACGCACTGCCCGCTG  
CGAGCTGCGGTACCCAGCAGCCGGTGTCTGTGCCCGGAGAAGCCCCAGGGTCTGTGGCGCCCCGAGGAGGAGACAC  
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TCGAGCTGCTCAGGCTTTCTTTATGTACGGAGACCAGTTCAAAAGAAGAGGCTCTTTTCTACCGAAGAGTGTCTGG  
AGCAAGTTGCAAAGCATTGGAATCAGACAGCACTGAAGAGGGTGCAGCTGCGGGAGCTGTCGGAAGCAGAGGTCAGGAGCA  
TCGGGAAGCCAGGCCCGCTGTGACGTCCAGACTCCGCTTATCCCAAGCTGACGGGCTGCGGCCGATTGTGAACATGG  
ACTACGTGCTGGGAGCCAGAAGTTCGCGAGAGAAAAGGGCCGAGCGTCTCAGGAGGGTGAAGGCACTGTTCAGCGT  
CTCAACTACGAGCGGGCGCGGCCCCCGCCTCTGGGCGCTCTGTGCTGGGCTGGACGATATCCACAGGGCTGGCGCAC  
CTTCGTGCTGCTGTGCGGGCCAGGACCCGCGCTGAGCTGTACTTTGTCAAGGTGGATGTGACGGGCGGTACGACACCA  
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CAGAAGGCCGCCATGGGACGTCGCAAGGCCTCAAGAGCCAGTCTCTACCTTGACAGACCTCCAGCCGTACATGCGACA  
GTTCTGGTCACTGCAGGAGACCAGCCGCTGAGGGATGCCGTGTCATCGAGCAGAGCTCCTCCCTGAATGAGGCCAGCA  
GTGGCTCTTCGACGCTTCTCCTACGCTTATGTGCCACCACGCGTGCATCAGGGGCAAGTCTACGTCCAGTGCAGGGG  
ATCCCGCAGGGCTCCATCTCTCCAGCTGCTCTGACGCTGTGCTACGCGCATGGAGAACAAGCTGTTTGCGGGATTG  
GCGGACAGGGTGTCTCTGCGTTTGGTGGATGATTCTTGTGTTGGTGACACCTCACCTACCCACGCGAAAACCTTCTCAGGA  
CCCTGGTCCGAGGTGCCCTGAGTATGGCTGCGTGGTGAAGTTCGCGAAGACAGTGGTGAAGTCCCTGTAGAAGACGAGGCC  
CTGGGTGGCAGGCTTTTGTTCAGATGCCGGCCACGGCTATTCCCTGGTGGCGCTGCTGTGGATACCCGACCTGGA  
GGTGCAGAGCGACTACTCCAGCTATGCCCGGACCTCCATCAGAGCCAGTCTCACCTTCAACCGCGCTTCAAGGCTGGGAGGA  
ACATGCGTCGCAAACTCTTTGGGGTCTTGGCGTGAAGTGTACAGCCTGTTTCTGGATTGTCAGGTGAACAGCCTCCAGACG  
GTGTGCACCAACATCTACAAGATCCTCCTGCTGCAGGCGTACAGGTTTACGCATGTGTGCTGCAGCTCCATTTTCATCAGCA  
AGTTTGAAGAACCCACATTTTCTGCGCGTATCTCTGACACGGCTCCCTCTGCTACTCCATCTGAAAGCCAAGAACG  
CAGGATGTGCTGGGGCAAGGGCGCCGCGCCCTCTGCCCTCCGAGGCCGTGAGTGGCTGTGCCACCAAGCATTCCTG  
CTCAAGCTGACTCGACACCGTGTACCTACGTGCCACTCTGGGGTCACTCAGGACAGCCAGACGAGCTGAGTCCGGAAGCT  
CCCGGGACGAGCTGACTGCCCTGGAGCCGAGCCAACCCGGCACTGCCCTCAGACTCAAGACCATCCTGGACTGA

**Amino Acid Sequence:**

MPRAPRCRAVRSLLRSHYREVLPLATFVRRLLGPQGWRLVQRGDPAAFRLVAQCLVCPWDARPPPAAPSFQVQSCLKELVAR  
VLQRLCERGAKNVLAFGFALLDGARGPPEAFTTSVRSYLPNTVTDALRSGAWGLLLRRVGDVVLHLLARCALFVLVAPSC  
AYQVCGPPLYQLGAATQARPPPHASGPRRRLGCERAWNHSVREAGVPLGLPAPGARRRGGASRSRSLPLPKRPRRGAPEPERT  
PVGQGSWAHPGRTRGSPDRGFCVSPARPAEEATSLEGLSGTRHSHPSVGRQHHAAGPPSTSRPPRPWDTPCPPVYAEKHF  
YSSGDKQLRPSFLLSSLRPSLTGARRLVETIFLGSRPWMPGTPRRLPRLPQRYWQMRPLFLELLGNHAQCPYGVLLKTHCPL  
RAAVTPAAGVCAREKPPQGSVAPEEEDTPRRLVQLLRQHSSPWQVYGFVRACLRRLVPPGLWGRHNRERRFLRNTKKFISLG  
KHAKLSLQELTWKMSVRDCAWLRSPGVCVPAEHLRREEILAKFLHWMVYVVELLRSFFYVTTETTFQKNRLLFFYRKS  
SKLQSIGIRQHLKRVQLRELSAEVQRHREARALLTSRLRFIPKPDGLRPIVNMDYVVGARTFRREKRAERLTSRVKALFV  
LNYERARRPGLGASVGLDDIHRARWTFVLRVRAQDPPPELYFVKVDVTGAYDTIPQDRLTEVIAIKPQNTYCVRRYAVV  
QKAAHGHVRKAFKSHVSTLTDLQPYMRQFVAHLQETSPLRDAVVEIQSSSLNEASSGLFDVFLRFMCHHAVRIRGKSYVQCQ  
IPQGSILSTLLCSLCYGMENKLFAGIRRDGLLLRLVDDFLLVTPHLTHAKTFLRLTVRGGVPEYGCVVNLRKTVVNFVDE  
LGGTAFVQMPAHGLFPWCGLLLDTRTLEVQSDYSYARTSIRASLTFNRGFKAGRNMRRKLFGLRLKCHSLFDLQVNSLQT

VCTNIYKILLQAYRFHACVLQLPFHQVWKNPTFFLRVISDTASLCYSILKAKNAGMSLGAKGAAGPLPSEAVQWLCHQAF  
LKLTRHRVTYVPLGSLRTAQTQLSRKLPGTTLTALEAAAANPALPSDFKTILD