**Supplementary File 2: Sequences of DNA Constructs Used to Make ETHRB-p65AD and**

**Burs-LexA::VP16AD Lines**

**Sequence of “ETHRBMI00949-p65AD in 4b” construct:**

atacattttttttctagacagaaatatactttaattcaactaaattaatatatatatgtacctctcccatcttttagctattaaatagtcgaggaactcgactatagtattatatccggttttggtttaaaaaccaatcattgtttttttttaacgacacagtactatttaatatgggcttcaacatatattttaaatgatgaacccaagaaatgaaaaaaccataaaaacaagcggtcatgaaaatcgcgtcctggccagactggtacattggaaacttgaacttcatcccagactgggttaaccttttgcccatcgccattctctcatcatcacaaacagcttctcttcctgcctgctgaaacctcttctttttcccgccactcttggccttttcctccaaaatccaaccgtatccattatccattatccacgcccccggtaaccccgccacctgattacgtttcttgtttgctttctctccccaatctgcaatatcccccgagcagccccattctgtgggtggccgagtacaagctggccgagtacattgatggatcgtcggtggccgtgtgcctgacccaggccatcagcgactggacgctggccttcttcctgatgaccatctcggtgttcttcgtggtgccgttcgtgaccctggtggtgctgtacggcatcatcgcccggaatctggtctccaacagggcggccatgctgcgcgcccgtcccacgaagccggagcttagtctgaaggcccgcaagcaggtggtcctaatgctcggcgccgttgtgctgtccttcttcgtctgcctgctgcccttccgcgtcctcaccctgtggatcatcctcagcacggaccaaacactgcacgatctgggattggtgcgctactacagcttgctgtacttctgtaggatcatgttgtacctcaactcggccatgaatccgattctttacaacctgatgtccaccaagtttcgaaggggtttcaagcggctttgtcaggacgcagggcgattactgctggaattggtgacattgggaagaaggaaggaagactcttctcgcgggcgcagaggtaccttgtcactgggcatgggcaccaatacgaacacgaataccaactcctcaaatgccacaggagccacgagctccagcattctctcgagaagctccaatcgcaggtgcagcgaggatatcagtcgcacccgccttaagatcgagatgcagatgccatgtggcagcgacctggaggccatggccatgctgcagcattccaccttgggcaagggaattgccaggcgagtgagtgatagccgtctcatgcctctgagaaatcatcaaccacgacgccacaagccgcaaataagtttcgacgaggagtcactggaggagaataagcgtagtgaagcgaaaatcccaacaaaatgtcgagaaaagcttcctggaatagcaagagaaatagtaaatctgaccgaaaataccctcggatccgcgagatgggcgtgaaaaatcgcctttaacccgtttacacactcgcttcacttggctggaatgtgccgatgacgctgatcccgatcccgattcctattcccgctcctggtaaacacaaatcgcttcctgaacgcttttggcagccataatcgatttcagtcacccgctgacagctgccgagaatcccgaatcgtagttgggctgccgccttggacatttccgtaccaaaaacaatcaatttttcgggctattaaactcgaatgaatgtgccaaagataaataacagcaacgacagccgaacagcactaaaactaccactactggtcagggttaggagtccagatatcgactggcagtaaggggtaagccattaggtggccttcgaggagcggagctggcaaatggaaatggcttaatatgcgtttgggcgaaccatcaggtcggcggataaacatgatttaggtgtattgaaatagtttccgtacgccggaccgtacaaaatggccgccattacacgggcggccatcaccggaagtcgaaaaaactgttgcctacttgccggcagctcaaataaaaagcttagctcaatatgcacacaatgtccacatgtaaacacagctgtacatacacatacatacccccacacgcacacatagccaaatattaatatttatatttgtacgaacatatttatatacacatatttacatatatatagtctgcttataaatatgtacaaggaaccacacgcacacactcacacacacacgagagtttgtaagtaaataaattttttatgacaactcatggcgggacttttccacattaccccatccaatcggaatctgtaatttatataattctaaggaaatcggacaaatgttcgtcctctgtaaatatacgtattcgtaccatgcgcgtagctttttaatttgttttcgtagccctatgacgtagactcccacttttgtagagtaaaaagtaataagtagcttgaacccacaccatcctgcgagtatgatgagtatgagcagacgctgccgtttccgtttccgctgtgtgattaagttgagtgcttcgcccccgaaacttttccagtagttagccgttgagtagcttttaaatatttgtttgtttcctgcccgcagcgcgataaaactttgcagacagcgctagtcactctagtccccgctaaaactgataatatgattcttgcagtcccatcatcgccatatccacctacagcgtggaaccctacggggacggaaccgatgctcccgtttgcaccaccgccgccgatggtttctggtcgatcttctacttcgtgggctgcatcacggtgtttttcttcctgcccttcggcatcctggttcttctatacgcggccatcgcttacaagctgctccgtcccaacaacgccttccaccgaccaacctccccgcagccacagcagccgtccggcggagccaccagtggctcctcacaggtgcccagcaccaagggtaacagccatcaacaaagcaacgggatgaggaagcatcgcaagcaggtaatcttcatgctggtggccgtggtgtctagcttttttgtttgccttctacccttccgggccttcaccctctgggtgatcctggccagcgccgaggatgtcgagggtctgggcattgccggctactacaacctgctgtacttctcgcgcttcatgctctacctaaactcagccatgaacccgatcctctacaacctgatgtcctccaaatttcgcagcggcttctggcggctgctgctcacttgtctgggccaacggccacatcaccaccatcgccaccactaccatcagaggcagcatccaacggcaggcggaagtgggcgcaatgcgtccacgcgacaggaacaggatgccgaggaaggagctgcgctggcgggaacgaccagcgcccgacatccacgtcgcacactccgccgcgaggccaccttcttgatcaactccatatccacctcctcgggtacggatcgcaccacatcatcatcggcgtggcgcagcaacagtctgtccatttccggtctgagcgaacgggagcgcggcatactgggagccgctatcatcggcacaacggctgccaccgttacaaccgcctgtctgcaggagcgacgcgccagcaagatcgagggccgcggcagcctgctgacctgcggcgatgtggaggagaaccccgggcccatggataaagcggaattaattcccgagcctccaaaaaagaagagaaaggtcgaattgggttccacgccgatggagttccagtacctgcccgatacggatgaccgtcaccgtatcgaagaaaagcggaagcgaacctatgaaaccttcaagtccatcatgaaaaagtcccccttctcgggccccacggacccgcgccccccgccccgtcgtattgcggttccttcgcgcagcagtgccagcgtccccaaacccgcaccgcagccctacccgttcacttcctcccttagcacgattaactatgatgagttccccacgatggtgttccccagtggacaaatttcccaggcatcggcactggctccggccccaccgcaagtcctcccccaggcgcccgctccggcaccggctcccgcaatggtgagtgctctggcccaggcccccgctccagtccccgtgctggcgcctggacccccacaggcagttgcccctcctgctccgaaaccaacgcaggcgggcgaaggaaccctgagcgaggccctcttgcagcttcagttcgatgacgaagacttgggagccctgctgggtaacagcacagaccctgccgtattcaccgatctcgcatccgtggacaacagcgagtttcagcagctcttgaatcagggaatcccggtcgcacctcataccacagagcccatgctgatggaatacccggaggctatcacgcgactggtgaccggcgcacagcgaccacccgatccagcccctgccccactgggtgccccgggtttgcccaatggcctcctcagcggcgatgaggatttctccagcatcgctgatatggatttctccgctttgctgagccagataagctccgctagcggaggaggtggtggaggtggaggtggaggtactagtctggagatcgaggccgccttcctggagcgcgagaacaccgccctggagacccgcgtggccgagctgcgccagcgcgtgcagcgcctgcgcaaccgcgtgagccagtaccgcacccgctacggccccctgggcggcggcaagtaaagatctgaatcccatcctaaatatgcatccttcgagtccctgtccactgccagcaaccgttaaagtatttagttgaattccaacagcaaatagtcatagttttagaaaaattttgttgtaaagactgaagtacctcagaagaagtcaataaacgcaagagaagatgttttttaaaatgaatcgtagatactgaaaaaccccgcaagttcacttcaactgtgcatcgtgcaccatctcaatttctttcatttatacatcgttttgccttcttttatgtaactatactcctctaagtttcaatcttggccatgtaacctctgatctatagaattttttaaatgactagaattaatgcccatcttttttttggacctaaattcttcatgaaaatatattacgagggcttattcagaagcttatcgataccgtcgaataaagccaaatagaaattattcagttctggcttaagtttttaaaagtgatattatttatttggttgtaaccaaccaaaagaatgtaaataactaatacataattatgttagttttaagttagcaacaaattgattttagctatattagctacttggttaataaatagaatatatttatttaaagataattcgtttttattgtcagggagtgagtttgcttaaaaactcgttt

**Sequence of drosophilized LexA::VP16AD DNA construct:**

atgaaggccctgaccgcccgccagcaggaggtgttcgatctgatccgcgatcacatcagccagaccggcatgccccccacccgcgccgagatcgcccagcgcctgggcttccgcagccccaacgccgccgaggagcacctgaaggccctggcccgcaagggcgtgatcgagatcgtgagcggcgccagccgcggcatccgcctgctgcaggaggaggaggagggcctgcccctggtgggccgcgtggccgccggcgagcccctgctggcccagcagcacatcgagggccactaccaggtggatcccagcctgttcaagcccaacgccgatttcctgctgcgcgtgagcggcatgagcatgaaggatatcggcatcatggatggcgatctgctggccgtgcacaagacccaggatgtgcgcaacggccaggtggtggtggcccgcatcgatgatgaggtgaccgtgaagcgcctgaagaagcagggcaacaaggtggagctgctgcccgagaacagcgagttcaagcccatcgtggtggatctgcgccagcagagcttcaccatcgagggcctggccgtgggcgtgatccgcaacggcgattggctggaattccccgggatccgccgccccgccggcatccccggggatctggccccccccaccgatgtgagcctgggcgatgagctgcacctggatggcgaggatgtggccatggcccacgccgatgccctggatgatttcgatctggatatgctgggcgatggcgatagccccggccccggcttcaccccccacgatagcgccccctacggcgccctggatatggccgatttcgagttcgagcagatgttcaccgatgccctgggcatcgatgagtacggcggctaa