

An interolog-based barley interactome as an integration framework for NLR immune signaling.

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**S1 Text. Bait and prey sequences used for Y2H binary validation among *Mla* alleles, orthologs and outgroup NLRs.**

### **BAIT SEQUENCES**

#### ***Mla1\_1\_675\_AY009939.1\_Zhou\_2001***

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**PREY SEQUENCES**

**Kinesin protein (HORVU.MOREX.r2.1HG0038710)**

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**POLAR-like domain protein (HORVU.MOREX.r2.7HG0616280)**

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**Dynamin-related protein 3A (HORVU.MOREX.r2.3HG0259240)**

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**Protein disulfide isomerase (HORVU.MOREX.r2.5HG0402280)**

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TCAAGAAGGTGTTGAACGCGAACGGGGTGGTGTGTTGGAGTTCTTCGCGCCGTGGTGC  
GGGCACTGCAAGCAGCTGACGCCGATTTGGGAGAAGGCCGCCGGCGTCTCAAGGGCGT  
CGCCACAGTCGCCGCGCTCGACGCCGACGCGCACAAGGAGCTTGCGCAGCAATATGGAA  
TACGGGGATTCCCAACCATAAAAGTATTTCTCCCTGGCAAGCCGCCAGTGGATTATGAAGG  
AGCAAGAGATGTAAAGCCCATTGTAAATTTTGTCTGTCTCGCAGGTCAAAGGTCTTCTCAGA  
GATAGGTTGGATGGTAAGGCATCAGGAGGTTCAAGTAGCAAAACCTCTGGTGGCTCAAGT  
GAGAAGAAAAACGAACCAAAATGAATCAGTAGAATTGAATTCGAGTAACTTTGACGAACTCG  
TTATCAAAAGCAAGGATCTTTGGATTGTGAGTTCTTTGCACCATGGTGTGGGCACTGCAA  
GAAATTGGCTCCTGAATGGAAAAGGGCTGCAAGAAGTGAAGGGTCAAGTGAACTAGG  
CCATGTTGATTGTGACTCTGATAAGTCCTTGATGAGCAAGTACAAGGTAGAAGGTTTTCCAA  
CTATTTTGGTATTTGGTGCCGATAAGGACAGCCCGTTCCCCTACCAGGGGGCTAGAGCTG  
CTTCTGCTATCGAGTCCTTCGCGTTGGAGCAGCTGGAAGCGAACGCTGCACCACCTGAAG  
TTTCTGAGTTGACTAGCGCAGATGTGATGGAAGAGAAGTGTGCTTCTGCTGCCATTTGCTT  
TGTGTCTTTCTTCCAGACATCCTGGACTCAAAGGCAGAAGGAAGAAACAAGTACCTTGAG  
CTGCTACTATCTGTTGCTGAGAAATTTAAGAAGAGTCCATACAGTTTTGTCTGGGCAGGCG  
CCGGCAAGCAAGCTGATCTGGAGAAGCAGGTTCGAGTCGGTGGCTATGGCTATCCAGCC  
ATGGTCGCTCTCAACGTGAAGAAAGGCGCATACGCTCCGCTCCGTAGCGCCTTCGAGCTC  
GCCGAAATCACCGAGTTTGTGAAGGAGGCAGGGCGCGGCGGAAAGGGCAACCTTTCTCT  
GGAGGGCGCCCCGACGGTGGTCCAGTCGGAACCATGGGACGGCAAGGATGGAGAGGTC  
ATCGAGGAGGACGAGTTCTCGCTCGAGGAGCTCATGGCGGACAGCTCTGCGCCCAACGA  
CGAGTTGTGATTCTCGAACCATGGTAGCGTTTAGAGGAACACTGATGCTTCACTTGTTCTG  
ATGTGTACACTGTACAATTTGGACGGGACACTTTTTGGAATGCCTTTTCTTATCTCAATGTT  
AGCATTGTGGGAGAAAGCTCTGGTGTGCAAGGTGTGGGGGTGTCTTGCCCCCGAAATAA  
AACCAGTTCTGAGCTTAAAAA

**Basic helix-loop-helix (bHLH) transcription factor (HORVU.MOREX.r2.1HG0058670)**

CCAGCGGATGACGCACATCGCCGTCGAGCGCAACCGGCGGCGACAGATGAACGATTACC  
TCAGGGTCCTCAGGTCCCTCATGCCGGGATCCTACGTCCAGAGGGGAGACCAAGCATCAA  
TCATAGGCGGAGCCATAGAGTTCATACGTGAGCTAGAGCAGCT



**WPP domain-associated protein (HORVU.MOREX.r2.3HG0208220)**

GCACCGCGGCAGGAAAGTGGCGTGCCTCCAAATTCCAACCTAGCAAACATGGCAGAGATC  
TTGGATGTGCCAATCAGTGGCACCAATGGAAGTGCCACTGTTCAAGCTGAACAGAGCTTGA  
GTGTGCCACTCAGGGACACCAACGGAAGTGCCAGTGTTACGGTGAAGAGAGCTTGGATG  
TGCCAGTAAGTGATACCAATGGAAGCGCCACTGTTCAAGGATGAACTTCTTCGGAAGGAAA  
TGAGTTAATCATCGTGGATGAGATGGACTCCTTGTGGGATGATGTAAATACCATGGTTGAT  
ATCTCAACATTCGTGACGTACTCTGTCATCAAAGGGTTTGTAAAAGATGCCGAACAAGAAAT  
AGGTCAGCAGCTTGCTTCCAAGGATGAAGAGATAAGGTTGCTGAATCAAAAAGCTGATGCAG  
CTTGGAATGGCAGCCTAAGTTTGTCTGGGGGTCGGGATAGAAAATATGATGAAGTTTATA  
GTATCCGCCAACAGCTTCATGCCATTTCCAAGTCACTCTTGAATTCTGAGTGGGGTCTTTC  
GGGGTCCCAGTATAACTTTGATGGTGCAGATGATGTGAGTAACTTAGAGACAATGAACAT  
TCCTCCAGAAATGGTTCTGCAAAGGTTGAAAGTGCTGGAGCCTCTCCTGATGCGGCTTTTCG  
CTGATGCGTCATGTTTGAAGCACTTGGATAGGGATGCTTTGATAGCCCATTTTAAATAAGAG  
ATGAATACTATGAAAAGGATGCATGATAAAGTCGTGGAATGAAGACAGAAGAGATATTTG  
CACTCAAGCGAAACCTGCTAAACAAAGAAGGATCCAACCCATGGCATTACGGAATAACAA  
AGAATTCGAGCAGATTAGAAAGAAAATTGGGGAAGTTATGACAAGATTGGATGGCCTTCTC  
ATGGAGAATAATAAGAGAACCACTTCTGGCGTCAAGGCAGAAACATTTGCTGGCCAACAAG  
ACAAGAAAAATGTTTTAGATTCTGAAATCCAGCAAATACAAGGTGCTGCCACTAATAATCAA  
GTAGAAGTGTGTGCTTTTCTACACAGGCATCACACATTGCATCCATAGAGGCAGATCATG  
CAAAGAAAATTGGAATGTTAGAGTCTGATATTGAAGAAGCCAGGATGGCAACCATGATTAG  
AGAAGAGATAGAGATGATTGTAAGAGAGTTCGTTAACGAAATAGAAATACGGTTGCAT  
GGTAATGAGATGGAGCATAACATGAAGCAAGACATTTGCTCAGTTATTCAGAAATGAAGCTG  
TAGCAGAAGCAGTGTTAAACCTCAACTCTACATTGTTGAAGTACAATGAGGAAAAGAGCTG  
CTCTGAAGCGGCATCGACTATACAAAAGCAGGAGATTGAGAATCTGAAGCGAGCTGTTGA  
CTCTTTCAGTAAAGTAGTGAGAGAAAAAGAGGAGTGTGAGATTGAATTGGGAGCAATGAAG  
GGTCATATGGATTTATTATCCCATCAACTTGATTTACTTAAAGTCAAAGTGGAAAAGCAAGA  
CTCCTGTATATCTGAAAAGAACAAGGAGTTTGATATGATTGTCGGCAGAGTGGAGCAAGCT  
CTGCAGCATGTACGTCAAATGAGATCAATATGAGCGAGTTCCATGACAGATTTAGAAATG  
CTACAGACTCTCTGAAGGAGGTGGAGAAACAAAATCATTATTTATGTAAAGTCATCGAAGA  
GAAGGAGAAAATATTCACATCAACCATTTATAAAGAAAAGGAGTTCAAAGAACACATGACAA  
GTCTTGTTGAATCCATGAGAGAGTTTGAGAATCTTGTTACAGATCAACAAGCTATCATTGCA  
AACAAAGTTCAGCACAGTGAATCAAGGTTCTGTTTACTGAAAGACCAATGTAAACACCTCAT  
GAAAGAAGGCAATCTTTTGAGAAGGAAGGCATTGCGATACAAGGAGATATCTGAGACAAGA  
GGCTCTAATCTTCAAAGGCTGAGCTCGAGGTGGATTTACTTGGTGATGAGGTTGAGGCCT  
TAACGGATCTTCTTGCAAAAATCTATATTGCGCTCGACCACTATTCTCCAGTTTTGCAACAC  
TATACTGGAGTTATGGAGACCTTGAACATGATCAAGAAACACATAAGCACAGCAAAGTAAA  
ATGCCTTATGCACATTTACATCAGCTGGTGACATGTTAACAGCAGAATTTGGTCTTATTGGC  
CAGAAGGTGCACTTCAGACGATCTGCGGTAACCTTTTTTAGGCGGTTGATGCAGCCCTTGCT  
GTAGAAACCAAGGGCTGTGTAGTGCAGAATAGCTTGTTCCCCTCCGTAGGCAGTAGATTTT  
GCTAGTCTTTGAGCACCTTGCAACTGACCCACCCAAACCATGGCTAGTCCTTCCTTGTCG  
TGTCTCTGAGCTACATTCTGATGTATGGGGTTGTGTACCTGCTGATCTGCAAAAGTGAGA  
CTTGAGTGACCAGTAACAACGGTTGTGGAGTGCTTGTGACCAAATTTTCATTGCGTTTATGT  
AAGAGCTTGACATCTGAATTTGATGTTGTCTCAGTAATCTACAGACTCTGCTGCTTTTTTTTT  
TAATCTTGATATACACGGTGGCATCTAAAAAAAAAAAAAAAAAAAA

**AAA-ATPase 1 (HORVU.MOREX.r2.7HG0598410)**

CATTGCCAGCTTGTGTGAGGGCTTTACTGGGTGACACATCCTAGAACTGTGCAAGCAGGC  
TGCATTCTATCCTATCAGAGAGATTTTGAACAGCGAGAAAGATGGGACAAGAGCAAACAGT  
CCAAGAGCCTTGAGGCAATCGGACCTGGAGAAAGCTCTTTCAACATCTAGAAAGGGAAAG  
AAGGCCGCAAGCGGTGCGGCGTCAGGTTTCCAGTCTCCTGTGTGGACCCGTCCGTGCGA  
TCCTGAAGATGACCAGGTACAGAGCGCAATCT

**Homeobox-leucine zipper protein family (HORVU.MOREX.r2.4HG0338560)**

TCGAAATTGGCATGGGCATTCGTCCTGCTCACTCTATGCTCCAACAGCATGCGCGGGGAG  
AAGCTGGCGTTTCGTGAGAAAGAGAACCTGCTGGCGGCCTACATGGATCACGAGGAGCC  
CGAGCTGGAGGAGGCCGACGAGGAGGAGGAGGAGGAGGAGGAGGAGCGCGCCATGTCGTGC  
GGGCTGGGCGGGAAGAAGCGGCGGCTGGCGCTGGAGCAGGTGCGCGCGCTGGAGCGC  
AGCTTCGAGACGGACAACAAGCTGGACCCGGAGCGCAAGGCCCGCATCGCCCGCGACCT  
CGGCCTGCACCCGCGCCAGGTCGCCGTCTGGTTCCAGAACC GCGCGCCCGCTGGAAGA  
CAAAGCAGCTCGAGCGCGACTTCAACGCCCTCCGCGCCCGCCACGACGCGCTCCGCGCC  
GACTGCGACGCGCTCCGCCGCGACAAGGACGCCCTCGCCGCCGAGATACACGAGCTGAG  
GGAAAAGCTGTGACCAAGCCGGAGACGGCGGTGAAGGCGGAGGCCACCGGCAATGTC  
GAGGCCGCGGAGGAGCGCCTGCAGCAGGCGACGATGGTCGGCGCGGCGGTCTGCAAGG  
ACGGATCCTCGGACAGCGACTCGAGCGCGGTGTTCAACGACGAGGCGTCGCCCTACTCC  
GGCGCGGTCTTCGAGCAGCAGGGATTTCATGGGGTTTCGGCGCGTCGTTCTGGACACGGC  
GTCGGCGGCGCGGCCACACGGGCTGCACGTCCCTGCCCATGCTGGAACCCAAATGGC  
CCAGCGCGTACCCGTACGACGCGAGCAGGTCCAGCGCCTACGGCTTCACGGAGGAATGG  
CTGTCCGGGTTCGGACGCGATTGGCAACGACGGCAGCTCCGCCTTCTTCTCCGAGGAGCA  
CGTCTCCAACCTCAACTTCGGCTGGTGTAGCAGTGGCGCCGAGGGTTTTGACCTCCAGAG  
TACTGTAAAAAGTAAGACGGTGTCAATGTCCATGCAGCGACAGCGGGTACTTACTTTCTA  
CTGGCTAGCTACCTTAGCCTAGCTAGCGGACAAGGAGAGAGGTTAGCAATGGTGGAAATTC  
GATGAGAAGGGTGAATTGCCGGATGAATGGACCTCCTGCCTGCCATTGCCATGGAGGGAG  
GACGTAAATGTTACTACTAGTACACAGTACACAAATAACGGTCTCTAGGTTTAATCGATGGT  
GTAAAAAGTTGCAATCCAAGCATGCAGCCGTCCCGAAAAA

**Ubiquitin system component Cue protein (HORVU.MOREX.r2.7HG0618510)**

TCTGACATGGACGATGCACGGGCCCCGTGCATCAAGAGCTCTGGAAGCCTTGACGAAGTCC  
ATACTGGAGGGTGCAGGAGCTGAAGCAGCGCAGAGCTTGCATCAGGAGAACATGATGCTC  
AAGGAGCAGATGACGGCCGTCCTGTGCGAGAACGCGGTCTGAAGCGCGCGGTGGCAAT  
CCAGCATGAGCGACAGAAGGAGTTCGACGAGCGCAGCCACGAGGTGCAGGGCCTGAAGC  
AGCTCGTCCTGCAGTACCAGGAGCAGCTGAGGACTCTTGAGATCAACAACCTACGCGCTGC  
AGATGCATCTGAAGCAGGCCAGCAGAGCAGCTCCATGCCCGGGCGCTACAACCCGGAC  
GTCTTCTAGTTTGGCTTCAGGCTGATGTTGATGAGCCCTGGCCCTTGGGGATTGAGAGTTG  
AGACTAGTGGTACTCTGCCGTATGATGGTGAAGATGACTAGAAAATGTTGTTGCCTGGGAT  
TCAGACTAGTTGGGTGGATGTTGGTTTGCTGACCACCTGTTGGCCGTGGGATGGGGCGCA  
AGGCTCCCATGTAGATGATATGTTGGTTCAAACCTGTTGCGTTTAAACGTTTTCTGATTTAA  
TATATACACAAAACAATCCAGATTCTTTGCAAAAAA

**Kinetochore protein NDC80 homolog (HORVU.MOREX.r2.5HG0439020)**

CAACTGTCGGCGCCCTCTCGCCTCAAGGCGATGGAGGAGAAGAAGGATGCATTTACTGCC  
GACGTTTCAGAAGTTTGAGGCGGTGGTGGAGAGCTGGTCCACCAAGATCAAGGAGAAGGAA  
GAGGCTTTGCTGGAGAAGGAGAAGGAGCTTGAGGCCAAGGTGTTGAATTGCCAGCAGATC  
ATGGCCGAGAATGAGGAGCTGGTGAACAGGTGGAGGTGCAGGTGGTCAATGTGAGGGA  
CGTCAATAGGATGGCTAGGGAGATGCAAGCGGTGGAAAATGATATTGCCAAGTTGGAGAA  
TATGAATGCCGCACTGGAGGAGAAGGGGTGGGAACTCGAAGCTGCGCTGGTCAGTAAGC  
TTGAGGAGATCGAGGGCCTTGCCGAGCTGTGCAACCAGTCCCTCAGAAAGTTGAAACCCA  
GGATTGATTTCCAGTACGAGGTAAATTCAAAAGGATCCTCCCCGGCTGAGATCCTTGGTAC  
CACCTACAAAACCGCCCTGAAGCCCGCACTCAATGCTCTTCTTAGTGAGACTAACATGCTA  
GTTACCTCAAAGCATGGTGAGTCAGTTGATCTACAAAAGAAGTTGCAAGGAATTGTAAACAT  
GTTGGAGGAGAAAAGGAATCATGTTTCTGTTCTACAGGCTAAACATAACGAGATGACTGCT  
CAGATGGACTCACTGGATCGTGAAATCCAAAGCCATGTTTCACGCTGCGCAACCGATGCTA  
GAAAAATGAAAGACAAGTTTGAGGAAAAAGAACATCACCTGAACACCGTCGAGAAGGAGG  
CAGAGGTCTTTTTAAAGAACTCCGAGGAGGGTCTCCAAGCTGCGTTGAGGGAGACCGACG  
AAGAAACCCAGATGTGCGCCAGGGAGCTGCTCAAGCTCATCGATTCCATCTCGGAGTACA  
AGGAGTTTGTGGAGCTGTTGATTGCCGAGATAGTTGAAGAGCTCCACGAAAGCGCCGAAA  
ACATGGCTTCGCTGTGATCCAAGACTCTGGTGTGAGGTACAGGTTTGAAGCGAGTTGTAT  
TTGGTGCTGCTGCTGTAGAGTTTGTCCGTACGCGAATAGGTACCTTATTGATTGTTTAAC  
GTCGTCTTCGTTGTAGTGTGATAGTTTGAGGGCTTGATTGGAGTTGTAGTCGTGCGCAGGT  
GAGATGAGTTTGGTGTGCGTGTTTCTTGCTGCATTGGCCAGATGAACATGCAGAGTACTCC  
CTTCATTCCCAAATATACAAGTCCTTTTAGAGTTTCCATTAGGGGACTACATACCGAACAAA  
AGCATGTTTATATACATCCGTATATAGATTTTCAATGAAAT

**OBERON 2-like protein (HORVU.MOREX.r2.5HG0370990)**

GGGTTTTGCAACCTTTGCATGTGTGTGATTTGCAACAAGTTTGATTTTGAGGTCAACACATG  
CCGATGGGTTGGGTGCGATTTCTGTTCCCATTTGGACACACACTGACTGTGCGATTCTGTGT  
GGCCAGATTGGGACAGGGCAATCAATTAAGAGCAGCACCGGTCATGCGGAAATGCTTTTT  
AGGTGCCAGGCTTGCCAGAAGACATCAGAATTATTCGTTGGGTAAAGGATGTGTTTCAAC  
AATGTGCTCCTGGTTGGGATAGGGATGCCTTAGTACGAGAGCTTGAGTTTGTGTTGTAAGAT  
ATTTGCTCTAAGCGAAGACCCAAAAGGAAGAAATTTGTTCAAGGAAATGTGCGAATCTGATT  
GAAAGATTGAGGAATAGTTCTCCTGATTCTGTCAATCCTAGGATGATACTGCATGCACTTCG  
AGAGCTTGAGATGGATTCCCTGAAGAGCTCTGAAAATGAAGAATCAGGACGCTTGATCACT  
CCCCAGGAGGCATGTAATCGTATTGCAGAGGTAGTCCAAGAAGCTGTCAGAAAGATGGAG  
CTTGTTGCTGAAGAGAAAATGGGACTGTACAAAAGGCTCGCACCGCCGTGGAGGCCTGT  
GACCGTGAGCTTGATGAGAAGGCCAGACAAGTTCAGGAGTTCAAGGCCGAGAGGCTGCG  
GAAGAAGCAGCAGGTGGAGGAGCTCGAAAGCATTGTTGCGTTGAAACAGGCCGAGAGCCG  
AGATGTTCCAGCTCAAAGCAAGCGAGGCCCCGCCAGGAGGCTGAGAGGCTCCAGAGCATC  
GCGCTTGCCAAATCTGAGAGGGCTGAGCAGGACTATGCTAGCCTCTACCTCAAGCGGCGC  
CTGGAGGAAGCGGAGGCAGAGAAGCAGTTTCTTTTCGAGAAAATAAAGCTTCAGGACGGC  
CATAGGCCCCCGCAGGCGAGCAGCAGCGTGCTGGTGATTCTCTCAGGCGCCCTCTCA  
GGCGTTGATGCTGTCCAAAATTCAGGACCTTCTCAAGAACGTTGCTACCATGCCGACAAAG  
TCGGAGGCGCATTCAAATAAGAGCAGCAGTGCTCATCAGGTTTGGGATTACATGTTTGTG  
TTATTGTGCTAATGTATGGTGACTTAAGTGTGATGTGTTAGGAGTATAATGGGCGGTGCTC

CCCCTTGAAAAATCAAATATTAATGTTGTTGGCTATATCGGGATATGATATACTCATGTAGG  
CTACATATTTTAAATTGTTATTACTTTGAGTAAGAGATC

**Golgin 5 (HORVU.MOREX.r2.1HG0071390)**

AGGAGAACGTCTGCAGACAGTAATATGTCATACTATCTGAGGAGCATGACTCCAAGTGCTT  
TTGAATCAGCACTCCGTCAAAAGGATGGAGAATTGGCTTCCTACATGTCACGCTTGGCCTC  
ACTGGAATCTATTCCGAATTCCCTGGCAGAGGAGTTGGTAAAACTGACGGAACAATGTGAA  
AAGTTGCGGAGTGAAGCTGCTGCTCTGCCTGGCCTAAAGGCTGAACTGGAAGCACTGAAA  
CAAAGACACTTTCAAGCTCTGGAAGTTATGGGGGAACGTGATGAAGAGTTGGAAGAGTTAC  
GGAATGATATTGTTGACCTAAAGGACATGTACAGAGAACAAGTGGATCTTCTTGTTAGCCA  
GCTCCAGACATTGGGCGCCCGTGTATAGTGCAATTGACCCAACAAGATAACAGTTTTGAAG  
GCCCCAACATGTTCCGTCAGAGTTGAAAAAAGCAAAACCCGCGGCGAGTGTGGGAAGTTG  
ATAGTCATACGAGGAAGATATATCTTTATTGATTTTGTGTACATCGTGAAGGATCTTTGTTGT  
CGGTCTCGGTAGCATAGCCAGTGTGTTGTACACTAGACTGGATAGCTCCACAGCTCTACAT  
TCATTGATGACTTGCATGCAAAGTTTTTCGTTACAGAAAGAGAAGTGTGTCATCGTCTCAGC  
TAATAAATACTACTCCCTCCGTTTCTAAAAAA

**PI 4-kinase alpha (HORVU.MOREX.r2.5HG0404360)**

GGCGGAGGCGTAGTCTACACGGCCGTGCCGTTCTACAAGAGAGCCAGGCAGCTCGAAGA  
CAAGGCGATCGAAAACGTGGAACTGCTTTGGACGTTTTGGAGCGTGCCTCTGAGGTGAC  
GGAGAAGTTTGCTGCTAATGTTGCCAATTCCCTACCGAAGGATGGATCCCTGCACAAGTTG  
GCTGAGGAGCTTGAGTACATTGCTGAGGAAGTCGATAAGGATGCACACAAGGCTGAAGTC  
ATGATTAAGAAGATCGAAGCGCTCAGCGACAAGATTGACGCCGCGGTGGAGCCTGTCATT  
AAAGAGCTCGAGGAGGAGTTCAAGCCAAAGCCAGCATCCCACTCTGGGTGAGACGCCAG  
AAATGACCGTTACATAAACTGTGGGAGAACGCTCCCCAAAGTGTCGCTGTTGTACATAT  
ATGTTGCTGGTTTTCTTTCTTTCTTTTGAAGTGCCAACTTGTAATATGTTGTTGTGCCCT  
ATGAACTAGAAGGACCCCATGGTTACAGTAAGAAATGGTGATCGTGTGCTGGGTGCCCGG  
ATCTGAAGCACCTGTAATCCTGATAATGTTACAGTAAGAACTGCATCTGAAGAATGGAT  
ATGTATGTGCGTGCATCAACTCCGCCCTAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**Pentatricopeptide repeat 336 (HORVU6Hr1G017930/ HORVU.MOREX.r2.3HG0255360)**

TCGACGACGATGTGGCGTTCCCGAGCTCGCGCTCTCCTCCTACTCCGCTCATCCGTCCCC  
AGGTGCGCCACCGCCGCGCCGCAAAATCCACTTCGGAGCTTGACCCGAGCCCCGCCCCCGCC  
ACCACGCCTTCTCTCCCGCTTCCTCTCCTCCTCCTCCCCGGAGGCCCTGCCGGACGCCCC  
CTCCTCTTTTGCGGATGCCCTCCAGGATGATCCCTTTGCCTTGGCGCCCGGCGTTGAACC  
CGGATCGGCTGATCCCACTGAGGCCGACGAGGACAACCTGGCCGCGCTCTGGGAGCAGG  
ATGCGGGCGACGCCAACGACATCTTCGTCTCCCCCGCCTCCCCGACACCGCTGACTCAG  
AGGCCAGCGACCAGGAGGTGCCCCGCGTCCGCGCCGTCGTCCAGTCCACCCCGGAGGA  
CCAGATCCCCTCCGCCATCGCCGACATGGTCGTTGACTTCACCGAGCCGCTCCTAGCCGC  
CATCCTCCTCTCCGCCGAAGTCTGCAAGGTTGCTGATTCGGCCGAGATTGACAAGAT  
GGACGCTTACATGCTCTGGGATTTGGTGAAGGAAATGGGCAGTGTGCCTGGATCATTGAG  
CACCCCACTGTTGAACAGAGTGCTAGCAATGTTCTGGAAGCTTCAGAAATCGAAGGCGGC  
GCTGGAGGTGCTTGACAAGTTCAGTGAGTTTGGCTGCACTCCGGACGGTGACAGCTATTA  
TCTGGCGATTCAAGCGGCTGGAAAGAAGTCCATGGTTGGCGCCGCATGGGGAGTTTGCGA

GAAGATGATTAGCTCTGGGTGCTTCCCTGATGGGAAGAAGACTGGTGAGATTGTGACCTTC  
TTTTGCCAGGGGAAGATGGTGACGGAGGCGCATTAGTATACCTAGCAGCAAAGGAGAAG  
AAGGTTTCAGATTCCAACATCAGCCTTGGACTTCCTTGTTGGTGCTTTGGCGAAGAATGATG  
CGACCATCACTACGGCTCTGGAGCTGCTTGGGGAATACAAAGGAGACTCTCTTAAGCATG  
CGGGCAAGTCCTTTGCTGCTGTTATACATAGTTTGTGCAGGATGAAGAATGTGAATGATGC  
AAAGAAGCTGTTGATGAGGATGGTGAATCTTGGCCCAGCTCCTGGTAGTGCAGTGTTCAAC  
TTTGTTCATCACAGGATTGTCTAAAGAGGGAGAAATGGAAGACGCAAAGGATTTGATAAGAG  
TGATGGAGAGCCGAGGGGCTGCGCCCTGATGTTTATACATACAGTGTGATAATGAGTGGCT  
ATGCAAAGGGAGGCATGATTGATGAAGCCCATTCTCTACTTCGCGAAGCTAAGAAGATCCA  
TCCAAAACCAAGCAGGGTTACTTATCACATTCTAATCCGTGGTTACTGCAAGATGGAGGAG  
TTTGAGAAGGCCCTGGAGTGCCTAAAGGAGATGAAGGAGGATGGGTTGCAGCCAAACATG  
GATGAGTATAACAACTCATCCAGTCGTTATGTCTGAAGGCTATGGACTGGAGGACAGCTG  
AGAAGCTCCTTGAGGAAATGGAGGGCAGTGGGTTATGCCTTAAGGGCATTACCCGCAGCC  
TCATAGCAGCAGTCAAGGAGTTGGAATGGAAGAGGCGTCAAAAGACAGCCAAGAAGCAT  
AGTTTCTCTAGGATACGCTTGAAGTGACACAGCCACTAATCAGTTTTGCGGATCACCTCTT  
TTTGCTCTCTGCATCTCTGGTGAGGTTATGAAAAACACCATCTTTTGTACTTGCTGCTTGTT  
GTTAGATGCTAAAATAATATTGCATTTGTATTATAAATGCTGGACCTGAACGGATGCATATTT  
AATTTTGGTCTAAAAAAAAAAAAA

**Polyamine factor 1-binding protein (HORVU.MOREX.r2.7HG0598540)**

ACAAGAGAAAGCAAAGGCGAAGACGGGGAGCAGAAAACCTCCAGCCCGACGGAGGCCATC  
CGGTTCCCGCCGGGCCCGCTCCTCCTCCTCCCCCTCGCCGGCGCTCCAAAGAGGTCCCA  
TGGAGGAGGACGGCCCTAGCCGGAGCGGCCTGCCGCCGGTCCGGGGAGTGCGAATGGAG  
GGAGGAGCTGAGGCAGCAGCAGTCCCAGGTGGAGGCGCTGCACGACCGGCTCGTGGAG  
GTCAAGGTCGGGATGCGGCGCTCCGAGGACGATTCCGGCCGGGAGCTCGAGCACCTGTG  
CCGCAGGGTCAAGACCATCGCCACCCTGCTGGCGTACCTCAAATCCAAGGCCAGGATCAT  
GTCGATTCCGCACCTCGCGCACACGTCTGCGGGATCAGGAACCAGGATGGCGTGGGGT  
TCGTGACCGGCACGGGGTGCCCCCTGGCCGATTGGTCCAAGGCCCGCCGAGCCCGCTTCC  
TGTGGGGGAGGTTCCGGATGACAGGGCGGCGACAGAGGGTAGCGGCGTTCTGAAAAATGG  
CGATGCCGTTGAAGGGGATGGAGATGTCGATGACATCCTCAAGTCCATCCGCGTGGTGAC  
CGATGTCATGGAGTCTCTTGTCAGAGAGTGATTGTGGCCGAGTCTGAAACTGCTAATGAG  
AAAGAAAAGGTCAGGATTGGGTTGGAAGAGATCAGGAGGAAGACCATACAGGTTCGAGTCC  
ATGTCCGTCAAAGTCGAGGAGATGGAGAAATTTGCAGTGGGTACGAACGGCATGCTGAAT  
GAGATGAGGCAGCGGGTTGAAGATATGGTCCTAGAGACCACTCGGCAGAGGCAGCGCGC  
TGCTGAAAATGAGCAGGAGCTCAGCCGTGTGAAGAATGACTTTGAGTCGCTCAGAACTTAT  
GTCAGCACACTCGTTAGTGTGAGAGAAACCCTTCTTTCATCGGAGAAGCAATTCGAGACAA  
TGGAGAAGCTTTTTGACAGGCTAGTCGCAAGGACCAACCAGCTCGAGACTGAGAAAGCAC  
AGAAAGAAGCAGAAGTCCAGAAGGTCATGGAGGAAAATGTGAGGCTACGTGCCATGGTCG  
ACAAGAAGGACGCACAGCTCCAGGCGATGAGCGAGCAGTGCAAGTTCATGGCTCTGAACC  
GTCCAAACTAGCGGAAGGCGGACACACCAGATAAGAAACCTGGAGTTGCCCAACTGATGT  
CACTTACAGACTGCCGCAGCAGTGAAAAGAAAAAGAAGTTATATCCCTCGGGGCCCGAA  
TAACCGACGATGAAGCCATGTTCTTGGGTCCGTGATTTCGTGGTGCAAACCCAATCGTGAAC  
TGTCGTTACCTTAGATGTGGTGTGTCGAAATTGCAACCATGACTGTTGTATCTTGATTGTGT  
GTGTAAAGACTGGGCGCATTTGCCCGGTTTTCGTAAATCATACAGATGTATACCGCAGGTC

CATTCATCCTTCTTCTGCCTGAACCATATAGTTCAGCTGCTGCGTGCGTGCTGTTTTTTTTTAG  
CCGTAACTGTGGTGCTGTAAAAATAACTGAAATGTTTTGCTTATAGATAGACTGGTTATAT  
TTGCATCAATTTTCT