**Identification of** **upstream transcription factors and an interacting PP2C protein of dehydrin *WZY2* gene in wheat**

**Hao Liua, Ying Yangab, Linsheng Zhanga\***

**a. College of life science/State Key Laboratory of Crop Stress Biology for Arid Areas, Northwest A&F University, Yangling, Shannxi, China.**

**b. College of Nursing, Weinan Vocational&Technical College, Weinan, Shannxi, China.**

**\*Corresponding author E-mail:** **linszhang@nwsuaf.edu.cn****.**

**Supporting information：**

**Supplemental Table 1. Real time PCR primers of *XM\_020296294, XM\_020341647, XM\_020313116, and WZY2* genes.**

**Supplemental Table 2. Sequence of *XM\_020296294*, *XM\_020341647*, *XM\_020313116*, *PP2C* and the promoter of *WZY2*.**

**Supplemental Table 1. Real time PCR primers of *XM\_020296294, XM\_020341647, XM\_020313116, and WZY2* genes.**

|  |  |  |
| --- | --- | --- |
| Genes | Primer name | Sequence (5'-3') |
| *Actin* | Qactin F | ACCCAACCAGAAACAGCAAC |
|  | Qactin R | CTCATCCAACGAAACGGAAT |
| *XM\_020296294* | XM\_020296294 F | GCCGTTATGCTGGATGAGAT |
|  | XM\_020296294 R | TTGATGGCCAATGTCTGGTA |
| *XM\_020341647* | XM\_020341647 F | GCTCCGATAATGTGCATCAA |
|  | XM\_020341647 R | CCTTGATCTCTGCCACCATT |
| *XM\_020313116* | XM\_020313116 F | CAAGATCAGCCGTTGCAGTA |
|  | XM\_020313116 R | TCAGTGGATGCAGATGAAGC |
| *WZY2* | WZY2 F | AGGCAAACATGGCAGACTTT |
|  | WZY2 R | AGCCAGACGTGTGGAGAAGT |

**Supplemental Table 2. Sequence of *XM\_020296294*, *XM\_020341647*, *XM\_020313116*, *PP2C* and the promoter of *WZY2*.**

|  |  |
| --- | --- |
| **Gene ID** | **Sequence** |
| *XM\_020296294* | ATGGCCTTTACGGCCGGGGGTCAGGATGAAGGGCCTAGTGTCTCTTGTCCCAAGAAGAGGAAAAGACCAAGCCAGGATCGTGGGGTGAAGCATGTACAGGAAGGGAGCCAGCAATTGGCAACTCTGGCTGCAAAGCAGGAGAAAGATGACGACGACAAAGATGAACCAAAGAGGCCTATTGGGACATCCAGAAAGTCCAACGGGAAGCAAACTGAGGATAAATCTGATGCGCCAAAGGAAGATTACATTCATATAAGAGCTCGAAGTGGCCAGGCTACAAACAGCCATAGTCTTGCAGAAAGGGTTCGGAGGGAAAAGATTAGTGAAAGGATGAAATTTCTTCAGGACCTTGTTCCTGGTTGTAGTAAAGTCATTGGTAAGGCCGTTATGCTGGATGAGATAATCAATTATGTTCAATCATTACAGCGGCAAGTTGAGTTTTTGTCGATGAAACTTTCAGCTGTCAATCCAGCACTAGACTTCAACATAGAGCGCATTCTATCTAAGGATTTATTTCAGTCTCAAGGAACTGCATCGTCTACCTTTGGCTTCTTACCAGACATTGGCCATCAATTTTTGCATCCACCAAAACATTCTCAAGCTGCGTTGCACAGCATTGTAAATCCCGCCGATGCATTTGGAAGGGTAACAAATGCTCCGGTAGGATGTACATTCAAAGAGGCCACACATCAGGTGCCCAATAATTTTGATGGAGAGTTCCACAACGTGATTGGGATGCCTTTTACCCTGTTTAATGACCACGAATCAAATGATAAACCTTGA |
| *XM\_020341647* | ATGGCGCAAGAGAGTTGGAAAGAGGCAGAGGATACGGGTGTCCACGCGCCCGAGGCTCCGATAATGTGCATCAACAACTGTGGCTTCTTCGGGAACCGGATGACAGAGAACATGTGCTCAAAGTGTTACCGAGACACTGTCAAGGCCAAGAGCATGGCCCTTCTAGTTGAGAACAAAACTGCCGCTGCTGTTGCATCGTCACCCACACCAATGGTGGCAGAGATCAAGGATGAAGCGTCTGCCTCAGCCAAAGAAGGAAAACGAGTAGCCGAGGAAGAGGCGCCGAAGCCACCCAGCAACCGCTGCCTGTCGTGCCGGAAGAAGGTCGGGCTGACGGGGTTCAAGTGCCGCTGCGGAGACACCTTCTGCTCGATGCACCGCTACGCCGACGCGCACGATTGCAAGTTCGACTACAAGCAGGCCGGCAGGGAGCAGATCGCCCAGCAGAACCCGGTCGTCAAGGCTGACAAGGTCACCAGATTCTGA |
| *XM\_020313116* | ATGGTGCCCAGGGACATGGTGAATGCCCCCGCCGAGAGGCCGCACGTCCAGGGGTCTGTCGTGAACAGGAAGTGCGAGAAGAAGGTGCCAAAGAAAATCCATAAGTCGGAGAGGGAGAAACGGAAGCGAGGCACACAGAATGACCTCTTTAATGAGTTGGGAGCCATGCTAGAACCAGACAGGCAGAACAACGGGAAGGCATGTGTATTGGGTGACACTACACGGATACTGAAGGATTTAGTTTCACAAGTGGAATCTCTTCGGAAGGAGAATAGCACACTGAAGAATGAATCTCACTATGTTGTGTTGGAGAGAAATGAACTGCGTGATGACAACAGCATGCTTCGCAATGAAATCCTGGAGCTTCAGAACAAGCTTAGAGTGCGTCTGCAAAGCAACCCTATTTGGAGCCAGGATACTACAAGATCAGCCGTTGCAGTACCTTATCCCACAAGCGGAATGTTCCCAGTACAACATTCGCCACACTCACCAGTCATCACCTCGACGGCACTTTCACTGCAACCTGTAATCACTGAGCAATGCTATGCCGCCCCACCACGAGAGCTGCAGCTCTTCCCGGAAGCTTCATCTGCATCCACTGAAGACAGCGAACTGTCACAAGACCAGGGGATTTCCAATAATGTGACACGGCCCCAGGCACGGTACCCAACACCAGCGGTGATGTCGCCAGTAAACGAATTCCCAATCCTTCCAAGGATGGGGGAGGAGCAACAATATAGTAGTGGCACTAGCGAGGAAGACGGTGTGCATAGGGTTTAA |
| *PP2C* | ATGTCTAATGCAGTAACCGCAATAGAAGAAGAGCCAAAAGATTCAATTGATCTTACAAGGGTACTAGAGAAGGCCCATAGTAGCACAACAGTGCCGGGTTCATCGACCGCATGTATCATTGCTATAACAAATCAGGGAATACAAGCAATTAATCTTGGTGACAGTGGCTTTATAGTCATCCGAGATGGCTGCACATTGTGTAGGTCACCTGTACAACAACATGATTTCAATTTCTCCTACCAACTTCAGAGTGGCAACTCGAGTGACTTGCCTAATGCTGCACAGGTCTTCAAGGTACCTGTCGCGTCTGGTGATGTAATTGTCGCTGGAACAGATGGGTTGTTCGATAACCTGTACAACAACGATATAACAGCTGTAGTGGTCCACGCAACCAGAGCTGGCCTGGAACCTCAAGTGACAGCCCAGAAGATAGCGGCGCTCGCACGCCAGCGGGCACAGGACAAGAACAGGCCGACGCCGTTTTCGACCGCGGCCCAAGACGCTGGGTACCGGTACTACGGCGGGAAGCTGGACGACATCACCGTCGTGGTCTCGTACGTAACTGCCTTTGGCAACTCGTAG |
| *wzy2* Promoter | GTCGTGGCTATGGTGATGCAACAACGATAAATTCAGCCACGGCTTTGGCAAGAATTTTGAGGCATGTAGTCATAGTCCATGTCGTTACCCAATGTCTAGCTGCTCCGATCTTGTATAGATTGATCCAATGTAAATTTAATTTAATTTCTGAAAAAACTGACGCGTTAGTACCATCCTTTAATAATGAAAATATGTTTGGCCTATTTTCTTTCTTTTTCATTCCATGCCGACACTTCCAGTTTTCATTTTCGGAGGCAAACATGGCAGACTTTTGCTAGAGGAAAGAACGTGTTTCAGGGACTGTATCCCCCGTGTGTTGTCGCTTCTACCTCGAGAACAAGCTGAGACGTGGCAACCCGGACGCGTCCAGTAGCTGCACACGCCTGCACTTCTCCACACGTCTGGCTTCTCTTTATGGGCGAGTCACTAATCACCGGCTCCCGCCGACCAGCCCACTCATGCCCGCACACGTAGCGCCCCCGACTATCCTATCCCATCGTTAAAGTCGCTTATAAATTGCGCCTGGTGCTGCACCTGCTTCCACAACCACAAGTTGCAGCCAAGTGAGCAAGACAACACACCATATTTCTGAGATAATCAAGATCAGCACCTGTGCAAG |