

File S5

DNA and protein sequences of putative *HvPUMILIO* mutant in barley cv. 'Barke'.

Family 11266 was selected by the TILLING screen using *AdvanCE*TM FS96 capillary electrophoresis system. Presented gene fragment was sequenced following the Sanger technology, revealing a nonsense mutation.

Family 11266, Tryptophan to stop mutation

>Consensus sequence of tilled fragment of *HvPUMILIO*

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CAGGCAATCAAACAATGAGTCGACACATACATATGCATCAGTTATAGGGTCATCACTTTCAAGAAGTGCATCTCCTGACCCTGA
GCTCGTGAGGAGAGTTCTTAGTCTTGCCTTCCCCGATTGGTGTGAAACTTGGTGCTACCAATAACCAGAACAAATGGCGGTTCC
ATCTTCTTTAGCCGTAACCTTCCAGCATTGGTGGATCTGATGATCTGGTGGCTGCTTATCTGGTATGAACCTGTCGTCATCAA
GACCAGTCAATGGACATGCTGACCAATCCAAGCTCCATCAGGATGTGGATAGTGTCCGTAATTTCTCTATGACCAATACATGG
ACCACAACATGGTAATGGACAACACTCCTACATGAAACATTCTGAACAAGGTCAATCCAAGGGACCTCAAGAATATCCTGCAG
CTTCTATGAATTCTTCTATTATGAGGAATCAGATCAATGCTGGTGGATTACATCATTTGACAACTCATCCCGGGGATCTGGCTTT
TCTTCCCCAAGGATTGGTTCGCGTCCCGGTGGGAGTTTATCTTCCGACAGAATTTAGCTAACCTTGCAAACACTACAGTGGAA
TTGGAAGTCCAACCTGCGACATCTGGTCATCAGTTGCCCGTTGACCCACTCTATGCTCAATTTCTCGGGCAGCCGAAATTGCTGC
TTTTGCAGCCAACCTGCGAGGACCCATTGATGGAGAGGGTAACCTGGGAAGTTCTTACATGGATCTATTTGGTCATCAGAATGA
TTATCTGGTCCATTGCTTCACTCACAGAAGCAGTATGACTACTATGGGAATCTCGGGTCTGGTCTTGGTTATGCTGGGAACCT
TTGACAAGTCTGTTTTTCCCACTTCGCCAGTGGACCTGGTAGTCCACTCAGGCATGTGGATCGCAGCATGCGCTTCCAGTCCA
GTATGAGAAAATTGGTGGTTCTTTGGCTCCTGAAATTGAGATTTTGGTGGTAAGATGAATGCCAATTTGGTCCATCACTTCT
GGAAGAATTCAAGAGCAACAAAAGCCGATCATATGAGCTCTGTGAAATTGCTGGCCATGTTGTTGAGTTGAGGTAATTTTGTG
CTCACTGTCACTGAGTTCTTATATATGGTAACCTACTAAATTGCAAAATCCAAGATAGGCAATTGCATAGAGTTACCTATATTATTG
GCCACCCACCTTTCATATTTTGTGAGGAATCGTGCCAATGATCTCTTGTATCACAGATTTAGGTTATTGGTCTAACTTGTCTAT
TGAACCTTATCCAGTGCTGATCAATACGGGAGTGGTTCATACAGAAAAGCTTGAACCTGCCAGCGTTGAAGAAAAAGACATG
GTTTTCACTGAAATCATGCCCAAGCTCTCACATTGATGACTGATGTCTTTGAAATTTGTTGTTGAGAAGGATGGAACTATT
GGCAGCAATTATTTGCCAGTGCTATAAACATCCTGGCCTCACCATAAACTTTTGAATCAGTTTTTTGAGCATGGGAGCACGGC
TCAGATAAAGGAGTTAGCTGATCAGTTAATTGGGCGAGTCTTAGCACTCAGCCTTCAAATGTACG
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>Translated mutant sequence of *HvPUMILIO*

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MVTEMATRGEWRRPEGERGMEEEMELFRSGSAPPTVEGSAGALHGADVFLDDDLRADPAYHSYYSSGS
VNPRLPPPLLSREDWRSARLRPVPGTGSLGGIGDGRRTGGAGAGTGRPGDGLIGMPGLEIGRQSSFS
GLFQDDSYQHDTNRQGANRSTDLSSSRNRYGLHHESGAIGLQYDSKAPHLPGNQNNESTHTYASVIG
SSLSRSASPDELVRRVPSPLPIGVKLGATNNQNGSSSFSRNSSSIGGSDDLVAALSGMNLSSSRP
VNGHADQSKLHQDVDSVRKFLYDQYMDHKHNGQHSYMKHSEQGHSKGPQEYPAASMNSSIMRNQINAGG
FTSFDNSSRSGSFPRISSRSPGSLSSRQNLANLANYSIGSPTATSGHQLPVDPLYAQFLRAAEIAA
FAANCEDPLMERGNLSSYMDLFGHQNDYLGPLLQSQKQYDYGNLGSGLGYAGNSLTSPVFPTSPGGPG
SPLRHVDRSMRFQSSMRNFGGSFGS(W)/stop
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