**Table S5** 264 target genes of seven miRNAs in *A. mongolicum*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| miRNA | Target gene ID | | | | | |
| *A. thaliana* | *B. distachyon* | *O. sativa* | *T. aestivum* | *Z. mays* | total |
| amo-miR21 | AT4G13510.1 AT1G03980.1  AT3G63010.1 AT5G60310.1  AT2G02610.1 AT1G14685.3  AT1G14685.2 AT1G14685.1 | Bradi1g17270.1  Bradi4g25717.2  Bradi3g28995.2  Bradi2g12870.4  Bradi5g18373.1  Bradi2g50687.1  Bradi4g00740.7 | LOC\_Os11g30620.1  LOC\_Os02g20490.1 | Traes\_2BL\_9FEE99FDE.1  Traes\_1BL\_CA93E6359.1  Traes\_7DS\_9187110B2.1  Traes\_1AL\_C04849EE3.2 | GRMZM2G387760\_T01 GRMZM2G044736\_T01  GRMZM2G071768\_T03 GRMZM2G071768\_T02  GRMZM2G071768\_T01 GRMZM2G071768\_T04  GRMZM2G120596\_T02 GRMZM2G120596\_T01 | 29 |
| amo-miR5 | AT3G42174.1 AT4G15890.1 | Bradi3g18415.1  Bradi1g05792.2  Bradi1g05776.1  Bradi1g05772.1  Bradi1g05769.1  Bradi3g06460.1  Bradi1g21590.1  Bradi5g08523.1  Bradi5g26326.1  Bradi1g35592.1 | LOC\_Os04g16771.1  LOC\_Os04g16780.1  LOC\_Os02g09470.1  LOC\_Os07g48170.1  LOC\_Os04g49000.1  LOC\_Os02g52440.1 | Traes\_7DS\_45E7AEA09.1  Traes\_1AS\_45E7AEA09.1  Traes\_4AS\_5C36E4DE1.1  Traes\_6BS\_1FF560649.1  Traes\_6AS\_CFFBE97AE.1  Traes\_2DS\_46379020A.1  Traes\_6DS\_88849F302.2  Traes\_7AL\_8B3CB6CE1.1  Traes\_7DL\_17BEE8574.1  Traes\_7BS\_0FE435D63.1  Traes\_6DL\_936F83A4F.2  Traes\_1DL\_727F09EF8.1 | GRMZM5G866064\_T01 GRMZM5G834231\_T01  GRMZM5G803503\_T01 GRMZM2G405476\_T01  GRMZM5G827951\_T01 GRMZM5G854146\_T01  GRMZM2G330095\_T01 GRMZM2G427404\_T02  GRMZM2G309193\_T01 GRMZM2G309193\_T02  GRMZM2G020040\_T02 GRMZM2G020040\_T01  GRMZM2G048411\_T01 GRMZM2G012342\_T01  GRMZM5G804816\_T04 GRMZM5G804816\_T01  GRMZM2G145500\_T04 GRMZM2G145500\_T03  GRMZM2G145500\_T02 GRMZM2G145500\_T01  GRMZM2G008859\_T01 GRMZM2G030915\_T08  GRMZM2G030915\_T05 GRMZM2G030915\_T04  GRMZM2G030915\_T02 GRMZM2G030915\_T03  GRMZM2G030915\_T01 GRMZM6G743306\_T01  GRMZM6G743306\_T02 | 59 |
| amo-miR82 | AT1G10920.2 AT1G10920.1 | Bradi4g36000.1  Bradi3g22930.2 | LOC\_Os05g29974.3  LOC\_Os05g29974.2  LOC\_Os05g29974.1  LOC\_Os02g46830.1  LOC\_Os04g02550.1 | Traes\_6BS\_2858DDA68.1  Traes\_3DS\_06A104DD5.1  Traes\_6AS\_37008F637.2  Traes\_1BS\_20E123654.1  Traes\_1BL\_36B22EF51.1  Traes\_3AS\_6D7A4CE6C.1  Traes\_3AS\_A042A1916.1 | GRMZM5G863105\_T01 GRMZM2G137959\_T02  GRMZM2G137959\_T01 GRMZM2G066326\_T01  GRMZM2G094054\_T02 GRMZM2G094054\_T01 GRMZM2G088896\_T03 GRMZM2G116212\_T01  GRMZM2G088896\_T01 GRMZM2G181051\_T01  GRMZM2G175912\_T01 GRMZM2G344323\_T01 | 28 |
| amo-miR62 | AT1G72220.1 AT1G20370.1  AT1G53200.1 AT1G53200.2  AT2G25760.2 AT2G25760.1  AT3G61820.1 | Bradi1g41196.1  Bradi1g33480.1  Bradi3g13260.1  Bradi3g13260.3  Bradi3g13260.4  Bradi5g08029.1 | LOC\_Os02g28530.1  LOC\_Os02g05780.1  LOC\_Os05g49800.1  LOC\_Os08g13360.2  LOC\_Os08g13360.1 | Traes\_7BL\_0A23DDDE5.1  Traes\_7AL\_CFA3DB355.1  Traes\_1AS\_567C0606D1.4  Traes\_7DS\_3F29B2B5E.2 | GRMZM2G107715\_T01 GRMZM2G156129\_T01  GRMZM2G430518\_T01 GRMZM2G323750\_T01 | 26 |
| amo-miR44 | AT5G37510.1 AT5G37510.2  AT5G29075.1 AT3G29615.1  AT2G01037.1 AT2G10780.1  AT2G01034.1 AT2G01026.1  AT2G06470.1 AT5G30102.1  AT2G07660.1 AT4G03840.1  AT2G01028.1 AT5G35140.1  AT4G06596.1 AT1G65780.1  AT5G38990.1 AT4G37260.1  AT3G47540.2 AT4G06540.1  AT3G52742.1 AT2G15080.2  AT2G15080.1 AT4G32840.1  AT2G31770.1 AT2G31780.1  AT2G31760.1 AT3G19580.2  AT5G45530.1 AT3G01202.1  AT5G55507.1 AT3G56320.1 | Bradi2g45060.1  Bradi3g59110.1  Bradi2g58570.2  Bradi2g58570.1  Bradi3g20853.2  Bradi5g25490.1  Bradi3g34360.1  Bradi2g27208.4 | LOC\_Os05g43140.1  LOC\_Os11g47390.1  LOC\_Os03g24890.2  LOC\_Os08g41950.2  LOC\_Os03g24890.1  LOC\_Os08g41950.1  LOC\_Os09g32320.1 | Traes\_7AL\_842775A88.1  Traes\_7DL\_83F0C4C65.1  Traes\_3B\_582DCEA06.1  Traes\_3DL\_CC388EE7E.2  Traes\_2DS\_E934D5999.3  Traes\_3DS\_B99E505A9.1  Traes\_5DL\_282EFEC16.1 | GRMZM5G805906\_T01 GRMZM2G363066\_T01  GRMZM2G077937\_T01 GRMZM2G135236\_T02  GRMZM2G135236\_T01 | 59 |
| amo-miR77 | AT1G05710.4 AT1G05710.1  AT1G05710.3 AT1G05710.5  AT1G50920.1 AT4G02070.1  AT4G02070.2 AT5G38560.1  AT1G20060.1 | Bradi4g16238.1  Bradi3g53430.1  Bradi1g77480.2  Bradi1g20250.2  Bradi1g51340.1 | LOC\_Os11g38020.1  LOC\_Os08g10560.1  LOC\_Os02g17450.1  LOC\_Os01g46750.1  LOC\_Os01g46750.2  LOC\_Os01g46750.3  LOC\_Os05g03320.1  LOC\_Os06g14310.1  LOC\_Os08g43250.1  LOC\_Os12g39980.1  LOC\_Os07g22550.1  LOC\_Os06g30060.1  LOC\_Os02g50490.1  LOC\_Os02g04040.1  LOC\_Os07g09090.1  LOC\_Os03g09070.1  LOC\_Os02g52820.1  LOC\_Os09g18090.1 | Traes\_7AS\_0C6DA60D5.1  Traes\_2DL\_4892D0837.1  Traes\_2AL\_662F5B347.1  TRAES3BF069400030CFD\_t1  Traes\_2BL\_DE41B8E14.1  Traes\_4AL\_E8F3279AD.2  Traes\_2AS\_33014A346.1  Traes\_4AL\_CB2996256.1  Traes\_7DS\_A7148FE20.1  Traes\_4DL\_8D3CD8AAA.1  Traes\_4AL\_65DF744B71.3  Traes\_5DL\_223D601F3.1  TRAES3BF054200040CFD\_t1 | GRMZM2G161846\_T01 GRMZM2G467134\_T01  GRMZM2G110423\_T01 GRMZM2G171464\_T01  GRMZM2G014366\_T03 GRMZM2G176604\_T03  GRMZM2G176604\_T04 GRMZM2G014366\_T02  GRMZM2G173413\_T01 GRMZM2G014366\_T01  GRMZM2G176604\_T01 GRMZM2G061314\_T01  GRMZM2G061314\_T02 GRMZM2G061314\_T03  GRMZM2G545891\_T01 GRMZM5G809195\_T01  GRMZM2G700923\_T01 GRMZM2G057637\_T01 | 63 |