# Genome-wide analysis of the SPL/miR156 module and its interaction with the AP2/miR172 unit in barley

Rajiv K. Tripathi[1], Phil Bregitzer,[2] and Jaswinder Singh[1]*

[1]Plant Science Department, 21111 Rue Lakeshore, McGill University, Quebec, H9X 3V9, Canada
[2]USDA-ARS, National Small Grains Germplasm Research Facility, Aberdeen, ID 83210, USA

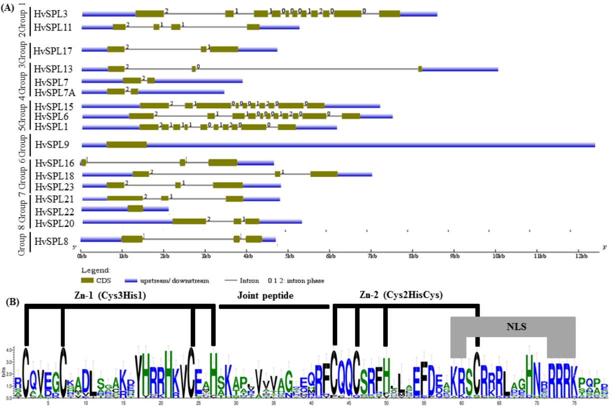

**Figure S1. Gene structure and sequence logo of barley SBP domain. (A)** The 5' upstream, 3' downstream, exons and introns are represented by boxes and lines, respectively and their sizes can be estimated using the scale bar at bottom. Blue boxes represent 5' and 3' un-translated regions, green boxes represent exons whereas introns are represented with black line. The numbers indicate intron phases. **(B)** Sequence logo of SBP domain was obtained from Weblogo. The overall height of letters represents residue conservation.

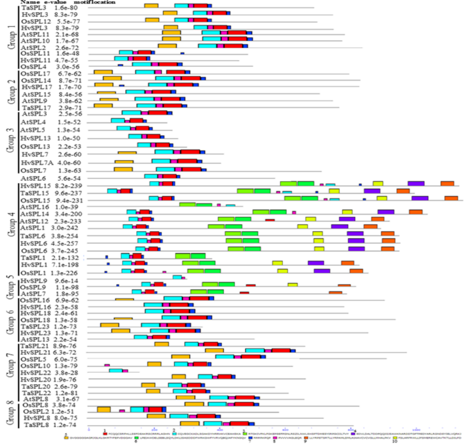

**Figure S2. Motif search in SPL proteins.** The distribution of 10 conserved motifs is indicated by numbered colored boxes.

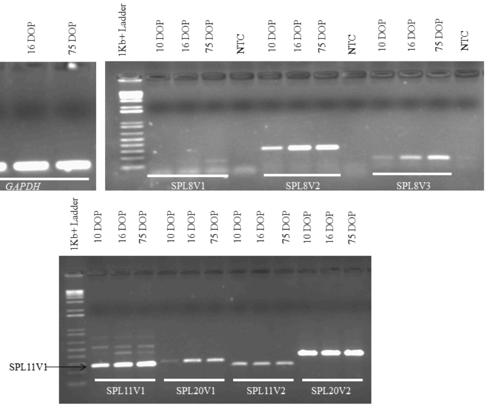

**Figure S3. Full length gel images of semi quantitative RT-PCR of alternative spliced variants of *HvSPL8*, *11* and *20* genes in 10, 16 and 75 DOP of barley growth and development.** *HvGAPDH* was used as control.

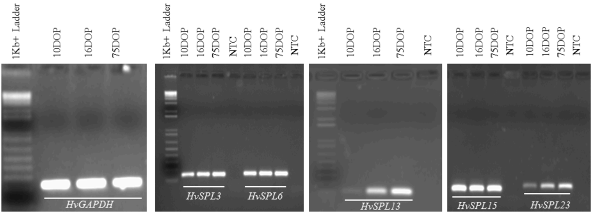

**Figure S4. Full length gel images of semi-quantitative RT-PCR of *HvSPL* genes in vegetative and reproductive phases of barley.** Expression of *HvSPL3, 6, 13, 15* and *23* in 10, 16, 75 d-old plants. *HvGAPDH* was used as control for semi-quantitative RT-PCR.

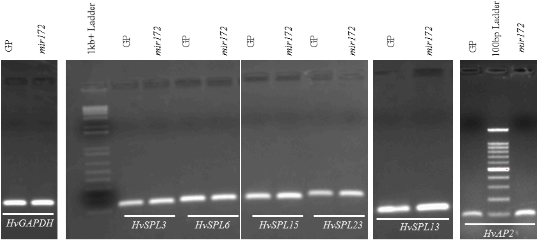

**Figure S5. Full length gel images of semi-quantitative RT-PCR based expression of *HvSPL3, 6, 13, 15, 23* and *AP2* in the spike of *mir172* mutant and wild type GP.** *HvGAPDH* was used as control for semi-quantitative RT-PCR.

Table S1. Coding sequences of 17 barley SPL genes.

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Table S2. Amino acid sequences of 17 barley SPL genes.

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Table S3. Genomic sequences of 17 barley SPL genes.

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TTCACAGTTTCATATATATGAG
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GAGACCTCAAGGACAGAGAGGAGCGAGAAGTGGG
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ACCCTGACCCTCCCCTNGGCGGCGCCGGGGACG

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ACCGGCTCCTGATGCGGTCCCGCCTGGGCGGCGT
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Table S4. SBP domain sequences of barley, Arabidopsis, rice and wheat
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>HORVU7Hr1G042370
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HNERRRKPPPG
>HORVU2Hr1G097610
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>HORVU2Hr1G097580
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XXXXXXXXXXXXXXX
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ADHNRRRRKSKP
>HORVU7Hr1G110950
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xxxxxxx

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>AtSPL2
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NARRRKPNPG
>AtSPL3
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HNERRRKSTTD
>AtSPL4
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>AtSPL5
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NERRRKPAFY
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GHNERRRRSNAS
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>OsSPL13
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>OsSPL14
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>TaSPL6
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GHNKRRRKTRPE
>TaSPL8
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>TaSPL21
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>TaSPL22
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>TaSPL23
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HNRRRRKPQPD
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**Table S5.** Details of miR156 complementary site in *HvSPL* genes.

| miRNA_Acc. | Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU5Hr1G076380 | 1 | -1 | 1 | 21 | 4216 | 4236 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU3Hr1G094730. | 1 | -1 | 1 | 21 | 3542 | 3562 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU0Hr1G039170. | 1 | -1 | 1 | 21 | 5953 | 5973 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU5Hr1G073440. | 1 | -1 | 1 | 21 | 3463 | 3483 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU6Hr1G031450. | 1 | -1 | 1 | 21 | 4119 | 4139 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU6Hr1G019700. | 1 | -1 | 1 | 21 | 6811 | 6831 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156a | HORVU2Hr1G048280. | 1 | -1 | 1 | 21 | 8382 | 8402 | UGACAGAAGAGAGUGAGCACA | CAUGCUCCCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU5Hr1G076380 | 1 | -1 | 1 | 21 | 4216 | 4236 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU5Hr1G073440. | 1 | -1 | 1 | 21 | 3463 | 3483 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU0Hr1G039170. | 1 | -1 | 1 | 21 | 5953 | 5973 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU3Hr1G094730. | 1 | -1 | 1 | 21 | 3542 | 3562 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU6Hr1G031450. | 1 | -1 | 1 | 21 | 4119 | 4139 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU6Hr1G019700. | 1 | -1 | 1 | 21 | 6811 | 6831 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR156b | HORVU2Hr1G048280. | 1 | -1 | 1 | 21 | 8382 | 8402 | UGACAGAAGAGAGUGAGCACA | CAUGCUCCCUCUCUUCUGUCA | Cleavage | 1 |
| hvu-miR5049c | HORVU6Hr1G019700. | 2.5 | -1 | 1 | 23 | 6478 | 6500 | AGACAAUUAUUUUGGGACGGAGG | CCUCCGUCUCAAAAUAAGUGUCU | Cleavage | 1 |
| hvu-miR5049c | HORVU1Hr1G060770. | 2.5 | -1 | 1 | 23 | 9210 | 9232 | AGACAAUUAUUUUGGGACGGAGG | CCUCCAUCCCAAAAUAAGUGUCU | Cleavage | 1 |

**Table S6.** Details of splice variants produced from *HvSPL* genes.

| **HORVU0Hr1G039170** | Chromosome chrUn: 248,141,188-248,147,114 reverse strand. | | | |
|---|---|---|---|---|
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU0Hr1G039170.1 | 2625 | 290aa | Protein coding |
| Novel | HORVU0Hr1G039170.3 | 2507 | 227aa | Protein coding |
| Novel | HORVU0Hr1G039170.5 | 1845 | 394aa | Protein coding |
| Novel | HORVU0Hr1G039170.7 | 1631 | 52aa | Protein coding |
| Novel | HORVU0Hr1G039170.8 | 1456 | 58aa | Protein coding |
| Novel | HORVU0Hr1G039170.4 | 1369 | 212aa | Protein coding |
| Novel | HORVU0Hr1G039170.6 | 1249 | 400aa | Protein coding |
| Novel | HORVU0Hr1G039170.2 | 985 | 272aa | Protein coding |
| Novel | HORVU0Hr1G039170.9 | 365 | 120aa | Protein coding |
| **HORVU7Hr1G051400** | Chromosome chr7H: 192,879,289-192,885,430 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU7Hr1G051400.1 | 4960 | 732aa | Protein coding |
| Novel | HORVU7Hr1G051400.3 | 4884 | 1130aa | Protein coding |
| Novel | HORVU7Hr1G051400.2 | 4874 | 1130aa | Protein coding |
| Novel | HORVU7Hr1G051400.5 | 4723 | 612aa | Protein coding |
| Novel | HORVU7Hr1G051400.4 | 4624 | 612aa | Protein coding |
| Novel | HORVU7Hr1G051400.6 | 4444 | 613aa | Protein coding |
| Novel | HORVU7Hr1G051400.7 | 3837 | 508aa | Protein coding |
| Novel | HORVU7Hr1G051400.9 | 3372 | 609aa | Protein coding |
| Novel | HORVU7Hr1G051400.8 | 3321 | 1106aa | Protein coding |
| Novel | HORVU7Hr1G051400.10 | 1131 | 237aa | Protein coding |
| **HORVU5Hr1G076380** | Chromosome chr5H: 551,053,196-551,057,389 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU5Hr1G076380.2 | 3828 | 159aa | Protein coding |
| Novel | HORVU5Hr1G076380.1 | 1727 | 159aa | Protein coding |
| Novel | HORVU5Hr1G076380.3 | 1652 | 159aa | Protein coding |
| Novel | HORVU5Hr1G076380.6 | 1636 | 159aa | Protein coding |
| Novel | HORVU5Hr1G076380.9 | 1179 | 392aa | Protein coding |
| Novel | HORVU5Hr1G076380.8 | 1137 | 264aa | Protein coding |
| Novel | HORVU5Hr1G076380.4 | 1124 | 306aa | Protein coding |
| Novel | HORVU5Hr1G076380.7 | 1084 | 279aa | Protein coding |
| Novel | HORVU5Hr1G076380.11 | 1002 | 333aa | Protein coding |
| Novel | HORVU5Hr1G076380.10 | 996 | 331aa | Protein coding |
| Novel | HORVU5Hr1G076380.5 | 917 | 159aa | Protein coding |
| **HORVU6Hr1G031450** | Chromosome chr6H: 133,169,150-133,173,306 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |

| | | | | |
|---|---|---|---|---|
| Novel | HORVU6Hr1G031450.3 | 2870 | 209aa | Protein coding |
| Novel | HORVU6Hr1G031450.7 | 2659 | 113aa | Protein coding |
| Novel | HORVU6Hr1G031450.10 | 2571 | 182aa | Protein coding |
| Novel | HORVU6Hr1G031450.4 | 2196 | 191aa | Protein coding |
| Novel | HORVU6Hr1G031450.1 | 1740 | 104aa | Protein coding |
| Novel | HORVU6Hr1G031450.9 | 1640 | 184aa | Protein coding |
| Novel | HORVU6Hr1G031450.2 | 1523 | 184aa | Protein coding |
| Novel | HORVU6Hr1G031450.6 | 1429 | 326aa | Protein coding |
| Novel | HORVU6Hr1G031450.5 | 1030 | 104aa | Protein coding |
| Novel | HORVU6Hr1G031450.8 | 1020 | 104aa | Protein coding |
| **HORVU7Hr1G042370** | Chromosome chr7H: 122,553,615-122,558,679 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU7Hr1G042370.5 | 3086 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.10 | 2775 | 245aa | Protein coding |
| Novel | HORVU7Hr1G042370.7 | 2685 | 541aa | Protein coding |
| Novel | HORVU7Hr1G042370.8 | 2526 | 841aa | Protein coding |
| Novel | HORVU7Hr1G042370.14 | 2251 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.6 | 2247 | 389aa | Protein coding |
| Novel | HORVU7Hr1G042370.13 | 2104 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.9 | 2008 | 512aa | Protein coding |
| Novel | HORVU7Hr1G042370.20 | 1988 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.18 | 1957 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.12 | 1929 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.15 | 1915 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.19 | 1825 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.16 | 1781 | 500aa | Protein coding |
| Novel | HORVU7Hr1G042370.11 | 1747 | 328aa | Protein coding |
| Novel | HORVU7Hr1G042370.1 | 1701 | 221aa | Protein coding |
| Novel | HORVU7Hr1G042370.3 | 1443 | 306aa | Protein coding |
| Novel | HORVU7Hr1G042370.4 | 1417 | 221aa | Protein coding |
| Novel | HORVU7Hr1G042370.2 | 1302 | 221aa | Protein coding |
| Novel | HORVU7Hr1G042370.17 | 1081 | 189aa | Protein coding |
| **HORVU5Hr1G073440** | Chromosome chr5H: 539,014,598-539,018,210 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU5Hr1G073440.12 | 3082 | 196aa | Protein coding |
| Novel | HORVU5Hr1G073440.13 | 2977 | 301aa | Protein coding |
| Novel | HORVU5Hr1G073440.4 | 2513 | 198aa | Protein coding |
| Novel | HORVU5Hr1G073440.7 | 1616 | 416aa | Protein coding |
| Novel | HORVU5Hr1G073440.6 | 1613 | 415aa | Protein coding |
| Novel | HORVU5Hr1G073440.14 | 1483 | 82aa | Protein coding |
| Novel | HORVU5Hr1G073440.10 | 1413 | 363aa | Protein coding |

| | | | | |
|---|---|---|---|---|
| Novel | HORVU5Hr1G073440.9 | 1413 | 363aa | Protein coding |
| Novel | HORVU5Hr1G073440.11 | 1261 | 196aa | Protein coding |
| Novel | HORVU5Hr1G073440.8 | 1185 | 394aa | Protein coding |
| Novel | HORVU5Hr1G073440.5 | 1153 | 384aa | Protein coding |
| Novel | HORVU5Hr1G073440.1 | 647 | 215aa | Protein coding |
| Novel | HORVU5Hr1G073440.2 | 644 | 214aa | Protein coding |
| Novel | HORVU5Hr1G073440.3 | 636 | 212aa | Protein coding |
| **HORVU2Hr1G097610** | Chromosome chr2H: 679,689,970-679,692,277 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU2Hr1G097610.1 | 2156 | 203aa | Protein coding |
| Novel | HORVU2Hr1G097610.2 | 559 | 125aa | Protein coding |
| **HORVU2Hr1G097580** | Chromosome chr2H: 679,640,052-679,642,809 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU2Hr1G097580.1 | 2606 | 209aa | Protein coding |
| Novel | HORVU2Hr1G097580.2 | 552 | 122aa | Protein coding |
| **HORVU6Hr1G030490** | Chromosome chr6H: 127,986,525-127,990,179 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU6Hr1G030490.3 | 1727 | 473aa | Protein coding |
| Novel | HORVU6Hr1G030490.2 | 1711 | 491aa | Protein coding |
| Novel | HORVU6Hr1G030490.1 | 884 | 294aa | Protein coding |
| Novel | HORVU6Hr1G030490.4 | 797 | 142aa | Protein coding |
| **HORVU6Hr1G019700** | Chromosome chr6H: 53,909,817-53,916,886 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU6Hr1G019700.1 | 7070 | 232aa | Protein coding |
| Novel | HORVU6Hr1G019700.2 | 4686 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.17 | 4575 | 384aa | Protein coding |
| Novel | HORVU6Hr1G019700.10 | 4312 | 232aa | Protein coding |
| Novel | HORVU6Hr1G019700.4 | 3625 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.16 | 3273 | 384aa | Protein coding |
| Novel | HORVU6Hr1G019700.11 | 3240 | 232aa | Protein coding |
| Novel | HORVU6Hr1G019700.3 | 3212 | 507aa | Protein coding |
| Novel | HORVU6Hr1G019700.9 | 3133 | 232aa | Protein coding |
| Novel | HORVU6Hr1G019700.6 | 3118 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.13 | 2933 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.18 | 2912 | 366aa | Protein coding |
| Novel | HORVU6Hr1G019700.12 | 2788 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.5 | 2553 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.15 | 2203 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.7 | 2158 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.14 | 1868 | 474aa | Protein coding |
| Novel | HORVU6Hr1G019700.8 | 1063 | 180aa | Protein coding |

| | | | | |
|---|---|---|---|---|
| Novel | HORVU6Hr1G019700.19 | 949 | 289aa | Protein coding |
| Novel | HORVU6Hr1G019700.20 | 897 | 283aa | Protein coding |
| HORVU2Hr1G048280 | Chromosome chr2H: 269,391,017-269,400,061 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU2Hr1G048280.1 | 1375 | 105aa | Protein coding |
| Novel | HORVU2Hr1G048280.2 | 588 | 195aa | Protein coding |
| Novel | HORVU2Hr1G048280.3 | 571 | 190aa | Protein coding |
| Novel | HORVU2Hr1G048280.4 | 235 | 78aa | Protein coding |
| **HORVU3Hr1G094730** | Chromosome chr3H: 647,368,957-647,372,642 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU3Hr1G094730.5 | 2272 | 227aa | Protein coding |
| Novel | HORVU3Hr1G094730.9 | 1733 | 328aa | Protein coding |
| Novel | HORVU3Hr1G094730.8 | 1663 | 256aa | Protein coding |
| Novel | HORVU3Hr1G094730.1 | 1630 | 429aa | Protein coding |
| Novel | HORVU3Hr1G094730.2 | 1630 | 429aa | Protein coding |
| Novel | HORVU3Hr1G094730.3 | 1610 | 426aa | Protein coding |
| Novel | HORVU3Hr1G094730.7 | 1582 | 357aa | Protein coding |
| Novel | HORVU3Hr1G094730.6 | 1477 | 227aa | Protein coding |
| Novel | HORVU3Hr1G094730.4 | 1344 | 295aa | Protein coding |
| Novel | HORVU3Hr1G094730.10 | 1307 | 345aa | Protein coding |
| Novel | HORVU3Hr1G094730.11 | 610 | 199aa | Protein coding |
| Novel | HORVU3Hr1G094730.12 | 356 | 118aa | Protein coding |
| **HORVU7Hr1G110980** | Chromosome chr7H: 631,945,657-631,949,862 forward strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU7Hr1G110980.2 | 1749 | 365aa | Protein coding |
| Novel | HORVU7Hr1G110980.5 | 1726 | 424aa | Protein coding |
| Novel | HORVU7Hr1G110980.4 | 1724 | 423aa | Protein coding |
| Novel | HORVU7Hr1G110980.3 | 1710 | 449aa | Protein coding |
| Novel | HORVU7Hr1G110980.7 | 1431 | 171aa | Protein coding |
| Novel | HORVU7Hr1G110980.6 | 1214 | 292aa | Protein coding |
| Novel | HORVU7Hr1G110980.1 | 904 | 237aa | Protein coding |
| **HORVU5Hr1G117190** | | | | |
| | Chromosome chr5H: 650,559,269-650,565,702 reverse strand. | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU5Hr1G117190.3 | 3817 | 473aa | Protein coding |
| Novel | HORVU5Hr1G117190.4 | 3774 | 473aa | Protein coding |
| Novel | HORVU5Hr1G117190.2 | 3723 | 498aa | Protein coding |
| Novel | HORVU5Hr1G117190.1 | 3661 | 473aa | Protein coding |
| Novel | HORVU5Hr1G117190.5 | 3584 | 964aa | Protein coding |
| Novel | HORVU5Hr1G117190.6 | 2333 | 442aa | Protein coding |
| **HORVU1Hr1G060770** | Chromosome chr1H: 441,051,831-441,063,137 forward strand. | | | |

| Name | Transcript ID | bp | Protein | Biotype |
|---|---|---|---|---|
| Novel | HORVU1Hr1G060770.2 | 2940 | 573aa | Protein coding |
| Novel | HORVU1Hr1G060770.3 | 2631 | 235aa | Protein coding |
| Novel | HORVU1Hr1G060770.4 | 2544 | 641aa | Protein coding |
| Novel | HORVU1Hr1G060770.6 | 2535 | 643aa | Protein coding |
| Novel | HORVU1Hr1G060770.5 | 2531 | 567aa | Protein coding |
| Novel | HORVU1Hr1G060770.10 | 2366 | 486aa | Protein coding |
| Novel | HORVU1Hr1G060770.8 | 2283 | 598aa | Protein coding |
| Novel | HORVU1Hr1G060770.9 | 1906 | 468aa | Protein coding |
| Novel | HORVU1Hr1G060770.1 | 1287 | 325aa | Protein coding |
| Novel | HORVU1Hr1G060770.7 | 880 | 83aa | Protein coding |
| Novel | HORVU1Hr1G060770.11 | 832 | 277aa | Protein coding |
| **HORVU0Hr1G039150** | chrUn:248118980..248122768 forward | | | |
| Name | Transcript ID | bp | Protein | Biotype |
| Novel | HORVU0Hr1G039150.3 | 1423 | 362 | Protein coding |
| Novel | HORVU0Hr1G039150.2 | 1420 | 361 | Protein coding |
| Novel | HORVU0Hr1G039150.4 | 1162 | 349 | Protein coding |
| Novel | HORVU0Hr1G039150.5 | 994 | 120 | Protein coding |
| Novel | HORVU0Hr1G039150.1 | 1152 | 383 | Protein coding |

# Table S7. miR156 targeted *HvSPL* splice variants.

## HORVU3Hr1G094730

| miRNA_Acc. | Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU3Hr1G094730.5 | 1 | -1 | 1 | 21 | 1577 | 1597 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.2 | 1 | -1 | 1 | 21 | 886 | 906 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.1 | 1 | -1 | 1 | 21 | 886 | 906 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.8 | 1 | -1 | 1 | 21 | 992 | 1012 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.6 | 1 | -1 | 1 | 21 | 782 | 802 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.10 | 1 | -1 | 1 | 21 | 636 | 656 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.7 | 1 | -1 | 1 | 21 | 887 | 907 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.3 | 1 | -1 | 1 | 21 | 878 | 898 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.9 | 1 | -1 | 1 | 21 | 1062 | 1082 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU3Hr1G094730.4 | 1 | -1 | 1 | 21 | 629 | 649 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.3 | 1 | -1 | 1 | 21 | 878 | 898 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.8 | 1 | -1 | 1 | 21 | 992 | 1012 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.5 | 1 | -1 | 1 | 21 | 1577 | 1597 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.9 | 1 | -1 | 1 | 21 | 1062 | 1082 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.4 | 1 | -1 | 1 | 21 | 629 | 649 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.1 | 1 | -1 | 1 | 21 | 886 | 906 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.2 | 1 | -1 | 1 | 21 | 886 | 906 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.7 | 1 | -1 | 1 | 21 | 887 | 907 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.6 | 1 | -1 | 1 | 21 | 782 | 802 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU3Hr1G094730.10 | 1 | -1 | 1 | 21 | 636 | 656 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

## HORVU5Hr1G076380

| Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HORVU5Hr1G076380.5 | 1 | -1 | 1 | 21 | 392 | 412 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.8 | 1 | -1 | 1 | 21 | 617 | 637 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.6 | 1 | -1 | 1 | 21 | 1111 | 1131 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.1 | 1 | -1 | 1 | 21 | 1149 | 1169 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.10 | 1 | -1 | 1 | 21 | 667 | 687 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.9 | 1 | -1 | 1 | 21 | 850 | 870 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.7 | 1 | -1 | 1 | 21 | 561 | 581 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.11 | 1 | -1 | 1 | 21 | 673 | 693 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.3 | 1 | -1 | 1 | 21 | 1121 | 1141 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.2 | 1 | -1 | 1 | 21 | 3250 | 3270 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.4 | 1 | -1 | 1 | 21 | 593 | 613 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.4 | 1 | -1 | 1 | 21 | 593 | 613 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.8 | 1 | -1 | 1 | 21 | 617 | 637 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.5 | 1 | -1 | 1 | 21 | 392 | 412 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.10 | 1 | -1 | 1 | 21 | 667 | 687 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.7 | 1 | -1 | 1 | 21 | 561 | 581 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.9 | 1 | -1 | 1 | 21 | 850 | 870 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.11 | 1 | -1 | 1 | 21 | 673 | 693 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.6 | 1 | -1 | 1 | 21 | 1111 | 1131 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.3 | 1 | -1 | 1 | 21 | 1121 | 1141 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.1 | 1 | -1 | 1 | 21 | 1149 | 1169 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU5Hr1G076380.2 | 1 | -1 | 1 | 21 | 3250 | 3270 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

## HORVU0Hr1G039170

| Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HORVU0Hr1G039170.6 | 1 | -1 | 1 | 21 | 923 | 943 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.3 | 1 | -1 | 1 | 21 | 2041 | 2061 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.2 | 1 | -1 | 1 | 21 | 495 | 515 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.1 | 1 | -1 | 1 | 21 | 2051 | 2071 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.4 | 1 | -1 | 1 | 21 | 990 | 1010 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.5 | 1 | -1 | 1 | 21 | 1495 | 1515 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.6 | 1 | -1 | 1 | 21 | 923 | 943 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.2 | 1 | -1 | 1 | 21 | 495 | 515 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.5 | 1 | -1 | 1 | 21 | 1495 | 1515 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.1 | 1 | -1 | 1 | 21 | 2051 | 2071 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.3 | 1 | -1 | 1 | 21 | 2041 | 2061 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| HORVU0Hr1G039170.4 | 1 | -1 | 1 | 21 | 990 | 1010 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

## HORVU5Hr1G073440

| miRNA_Acc. | Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU5Hr1G073440.13 | 1 | -1 | 1 | 21 | 2271 | 2291 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.12 | 1 | -1 | 1 | 21 | 2393 | 2413 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.5 | 1 | -1 | 1 | 21 | 818 | 838 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.8 | 1 | -1 | 1 | 21 | 799 | 819 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.7 | 1 | -1 | 1 | 21 | 866 | 886 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.10 | 1 | -1 | 1 | 21 | 707 | 727 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.9 | 1 | -1 | 1 | 21 | 707 | 727 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.6 | 1 | -1 | 1 | 21 | 863 | 883 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU5Hr1G073440.11 | 1 | -1 | 1 | 21 | 673 | 693 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.10 | 1 | -1 | 1 | 21 | 707 | 727 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.9 | 1 | -1 | 1 | 21 | 707 | 727 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.11 | 1 | -1 | 1 | 21 | 673 | 693 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.7 | 1 | -1 | 1 | 21 | 866 | 886 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.13 | 1 | -1 | 1 | 21 | 2271 | 2291 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.8 | 1 | -1 | 1 | 21 | 799 | 819 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.12 | 1 | -1 | 1 | 21 | 2393 | 2413 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.5 | 1 | -1 | 1 | 21 | 818 | 838 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU5Hr1G073440.6 | 1 | -1 | 1 | 21 | 863 | 883 | UGACAGAAGAGAGUGAGCACA | UGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

## HORVU6Hr1G031450

| miRNA_Acc. | Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU6Hr1G031450.1 | 1 | -1 | 1 | 21 | 1102 | 1122 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.8 | 1 | -1 | 1 | 21 | 549 | 569 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.4 | 1 | -1 | 1 | 21 | 1565 | 1585 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.7 | 1 | -1 | 1 | 21 | 2111 | 2131 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.9 | 1 | -1 | 1 | 21 | 1187 | 1207 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.6 | 1 | -1 | 1 | 21 | 878 | 898 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.2 | 1 | -1 | 1 | 21 | 885 | 905 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.5 | 1 | -1 | 1 | 21 | 412 | 432 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G031450.3 | 1 | -1 | 1 | 21 | 2232 | 2252 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.3 | 1 | -1 | 1 | 21 | 2232 | 2252 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.1 | 1 | -1 | 1 | 21 | 1102 | 1122 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.4 | 1 | -1 | 1 | 21 | 1565 | 1585 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.8 | 1 | -1 | 1 | 21 | 549 | 569 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.7 | 1 | -1 | 1 | 21 | 2111 | 2131 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.2 | 1 | -1 | 1 | 21 | 885 | 905 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.5 | 1 | -1 | 1 | 21 | 412 | 432 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.9 | 1 | -1 | 1 | 21 | 1187 | 1207 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G031450.6 | 1 | -1 | 1 | 21 | 878 | 898 | UGACAGAAGAGAGUGAGCACA | CGUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

## HORVU6Hr1G019700

| miRNA_Acc. | Target_Acc. | Expectation | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU6Hr1G019700.3 | 1 | -1 | 1 | 21 | 2579 | 2599 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.12 | 1 | -1 | 1 | 21 | 2289 | 2309 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.8 | 1 | -1 | 1 | 21 | 516 | 536 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.6 | 1 | -1 | 1 | 21 | 2538 | 2558 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.4 | 1 | -1 | 1 | 21 | 3040 | 3060 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.10 | 1 | -1 | 1 | 21 | 3806 | 3826 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.15 | 1 | -1 | 1 | 21 | 1725 | 1745 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.2 | 1 | -1 | 1 | 21 | 3827 | 3847 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.7 | 1 | -1 | 1 | 21 | 1582 | 1602 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.14 | 1 | -1 | 1 | 21 | 1385 | 1405 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.13 | 1 | -1 | 1 | 21 | 2441 | 2461 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.5 | 1 | -1 | 1 | 21 | 1968 | 1988 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.11 | 1 | -1 | 1 | 21 | 2734 | 2754 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.9 | 1 | -1 | 1 | 21 | 2598 | 2618 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156a | HORVU6Hr1G019700.1 | 1 | -1 | 1 | 21 | 6211 | 6231 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.12 | 1 | -1 | 1 | 21 | 2289 | 2309 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.2 | 1 | -1 | 1 | 21 | 3827 | 3847 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.5 | 1 | -1 | 1 | 21 | 1968 | 1988 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.9 | 1 | -1 | 1 | 21 | 2598 | 2618 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.1 | 1 | -1 | 1 | 21 | 6211 | 6231 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.10 | 1 | -1 | 1 | 21 | 3806 | 3826 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.7 | 1 | -1 | 1 | 21 | 1582 | 1602 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.3 | 1 | -1 | 1 | 21 | 2579 | 2599 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.4 | 1 | -1 | 1 | 21 | 3040 | 3060 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.14 | 1 | -1 | 1 | 21 | 1385 | 1405 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.15 | 1 | -1 | 1 | 21 | 1725 | 1745 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.13 | 1 | -1 | 1 | 21 | 2441 | 2461 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.11 | 1 | -1 | 1 | 21 | 2734 | 2754 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.8 | 1 | -1 | 1 | 21 | 516 | 536 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU6Hr1G019700.6 | 1 | -1 | 1 | 21 | 2538 | 2558 | UGACAGAAGAGAGUGAGCACA | CAUGCUCUCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR5049c | HORVU6Hr1G019700.1 | 2.5 | -1 | 1 | 23 | 5878 | 5900 | AGACAAUUAUUUUGGGACGGAGG | CCUCCGUCUCAAAAUAAGUGUCU | Cleavage | cdna:protein_coding | 1 |

# HORVU2Hr1G048280

| miRNA_Acc. | Target_Acc. | Expectatio | UPE$ | miRNA_start | miRNA_end | Target_start | Target_end | miRNA_aligned_fragment | Target_aligned_fragment | Inhibition | Target_Desc. | Multiplicity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| hvu-miR156a | HORVU2Hr1G048280.1 | 1 | -1 | 1 | 21 | 112 | 132 | UGACAGAAGAGAGUGAGCACA | CAUGCUCCCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |
| hvu-miR156b | HORVU2Hr1G048280.1 | 1 | -1 | 1 | 21 | 112 | 132 | UGACAGAAGAGAGUGAGCACA | CAUGCUCCCUCUCUUCUGUCA | Cleavage | cdna:protein_coding | 1 |

**Table S8.** Primer sequences used in this study.

| **Primer Names** | **Primer sequences** |
|---|---|
| *HvSPL3_qFP* | GATGTCTGTGGAGGGCAGAG |
| *HvSPL3_qRP* | CTTGCAGCCTTCAACCTGAC |
| *HvSPL6_qFP* | GAAGGAAAGCGAAGTTGTCG |
| *HvSPL6_qRP* | AAATTGGCGCATATTCCAAG |
| *HvSPL13_qFP* | GTGACCCGGGAACTAGTCAG |
| *HvSPL13_qRP* | GCCACAAATTATCCCAGCAG |
| *HvSPL15_qFP* | CGGTAGCAGGGGTATAAATGG |
| *HvSPL15_qRP* | TCAAAACGGGAACTGGAGAG |
| *HvSPL23_qFP* | AGTGCAGCAGGTTCCATTTG |
| *HvSPL23_qRP* | CTCCGTGGTGATTAGCGAAC |
| *HvSPL11.1V_FP* | CGCTTCGAAATTAGGTGGAG |
| *HvSPL11.1V_RP* | TGGATTCATAGCCACTGCTG |
| *HvSPL11.2V_FP* | TGCAAACCTGTGGTTATACAGC |
| *HvSPL11.2V_RP* | ATTGCCCACCTTTCCTCATC |
| *HvSPL20.1V_FP* | AGGAGCACCAGCACTTCATC |
| *HvSPL20.1V_RP* | TGCTAAAGCCCCAATACACC |
| *HvSPL20.2V_FP* | GCAAGAAAGAGGGTCTGTGC |
| *HvSPL20.2V_RP* | GCATGTGAATCCAGTGATGC |
| *HvSPL8.1V_FP* | CAGCCGGAATGTTCTTTCGGTC |
| *HvSPL8.1V_RP* | GGTGTATCATCAATCTATCCATAGC |
| *HvSPL8.2V_FP* | TACTTCCCCACCTTGGTCAG |
| *HvSPL8.2V_RP* | ACTGCTGGCAGAACCTCTGG |
| *HvSPL8.3V_FP* | CCGTCCATGTTTCTCTACC |
| *HvSPL8.3V_RP* | CCGGCTGCTTCTGTTCAC |
| *HvActinF* | GCCGTGCTTTCCCTCTATG |
| *HvActinR* | GCTTCTCCTTGATGTCCCTTA |
| *HvGAPDHF* | GTGAGGCTGGTGCTGATTA |
| *HvGAPDHR* | CGTGGTGCAGCTAGCATTTGAGAC |
| *HvAP2_FP* | AGGCCAAGTTCGACCAGAA |
| *HvAP2_RP* | CTGGGACTGAACTGCATGTG |