

**Supplemental Figure 1 CDS sequence alignment of *TaIAA15-3A*, *TaIAA15-3B*, *TaIAA15-3D* from CS wheat.**

<i>TaIAA15-A</i>	<b>A</b> TGTGGGGAGAGGGAGCTTCAACGGAGTCGCTCGCGGGCTCCGGGCTCGACTTCAAGGACACCGCGCTCACGCTCACCTCGCCCTGCCGGC	100
<i>TaIAA15-B</i>	<b>A</b> TGTGGGGAGACCGAGCGAGCTCACGGAGTCCTCGCGGGCTCCGGGCTCGACTTCAAGGACACCGCGCTCACGCTCACCTCGCCCTGCCGGC	100
<i>TaIAA15-D</i>	<b>A</b> TGTGGGGAGACCGAGCGAGCTCACGGAGTCCTCGCGGGCTCCGGGCTCGACTTCAAGGACACCGCGCTCACGCTCACCTCGCCCTGCCGGC	100
<i>TaIAA15-A</i>	<b>A</b> CCCCGACCGCAAGCGCGCCCTCCCTCCCTCGCGGACCGCGCTCCCTCCCTCGCGGAGGGCTCGCCGGCCCAAAGGGCGGGGT	200
<i>TaIAA15-B</i>	<b>A</b> CCCCGACCGCAAGCGCGCCCTCCCTCCCTCGCGGACCGCGCTCCCTCCCTCGCGGAGGGCTCGCCGGCCCAAAGGGCGGGGT	200
<i>TaIAA15-D</i>	<b>A</b> CCCCGACCGCAAGCGCGCCCTCCCTCCCTCGCGGACCGCGCTCCCTCCCTCGCGGAGGGCTCGCCGGCCCAAAGGGCGGGGT	200
<i>TaIAA15-A</i>	<b>G</b> GTTGGCTGGCGCCGGGTGAGGTCTTCCCAAGAACCGCGCTCGAGAACGTCGCCGCCGGTCCACCAAGGGCGGCCCTGGCGCCGGCCAAAGTTCTGTCAAG	300
<i>TaIAA15-B</i>	<b>G</b> GTTGGCTGGCGCCGGGTGAGGTCTTCCCAAGAACCGCGCTCGAGAACGTCGCCGCCGGTCCACCAAGGGCGGCCGCGCCAAAGTTCTGTCAAG	300
<i>TaIAA15-D</i>	<b>G</b> GTTGGCTGGCGCCGGGTGAGGTCTTCCCAAGAACCGCGCTCGAGAACGTCGCCGCCGGTCCACCAAGGGCGGCCCTGGCGCCGGCCAAAGTTCTGTCAAG	300
<i>TaIAA15-A</i>	<b>G</b> TGGCCGTGCGCAAGGGCTACCTCGCGGACTAAGCCGCTACGGCCGCTCCCGCCCTCCAGGG-----	386
<i>TaIAA15-B</i>	<b>G</b> TGGCCGTGCGCAAGGGCTACCTCGCGGACTAAGCCGCTACGGCCGCTCCCGCCCTCCAGGG-----	386
<i>TaIAA15-D</i>	<b>G</b> TGGCCGTGCGCAAGGGCTACCTCGCGGACTAAGCCGCTACGGCCGCTCCCGCCCTCCAGGGCAAGTTCTGTCTCCC	400
<i>TaIAA15-A</i>	----- <b>G</b> AAGTTCCGCAAAAGCAGAGATGAAGCTGGTGAGCGCGGTGAACGGGACGGAGTAGCTGGCCACCTACGAGGACAAGGGACGGGACTG	473
<i>TaIAA15-B</i>	----- <b>G</b> AAGTTCCGCAAAAGCAGAGATGAAGCTGGTGAGCGCGGTGAACGGGACGGAGTAGCTGGCCACCTACGAGGACAAGGGACGGGACTG	473
<i>TaIAA15-D</i>	----- <b>A</b> CTTCACCATCAAGAAGTTCCGCAAAAGCAGAGATGAAGCTGGTGAGCGCGGTGAACGGGACGGAGTAGCTGGCCACCTACGAGGACAAGGGACGGGACTG	500
<i>TaIAA15-A</i>	<b>G</b> ATGCTCGTCGGCGACGTCCCCTGGAAGATGTTTGAGGAAGCGCTGCCAACCGCTCCGGCTGATGAAGAACCTCGAGGGCGTGAAAGATAGCACCCAGAGCT	573
<i>TaIAA15-B</i>	<b>G</b> ATGCTCGTCGGCGACGTCCCCTGGAAGATGTTTGAGGAAGCGCTGCCAACCGCTCCGGCTGATGAAGAACCTCGAGGGCGTGAAAGCTAGCACCCAGAGCT	573
<i>TaIAA15-D</i>	<b>G</b> ATGCTCGTCGGCGACGTCCCCTGGAAGATGTA-----	531
<i>TaIAA15-A</i>	<b>G</b> CCCGGTGA	582
<i>TaIAA15-B</i>	<b>G</b> CCCGGTGA	582
<i>TaIAA15-D</i>	-----	