

### **A Oak1 DNA Sequence**

ATGGCTAAGTTCACCGTCTGTCTCCTCCTGTGCTTGCTTCTTGCAGCATTGTTGGGGCGTTGGATCTGAGCTTTCTGACTC  
CCACAAGACCACCTTGGTCAATGAAATCGCTGAGAAGATGCTACAAAGAAAGATATTGGATGGGGTGGGAAGCTACTTTGGTCA  
CTGATGTCGCCGAGAAGATGTTCCTAAGAAAGATGAAGGCTGAAGCGAAAACCTCTGAAACCGCCGATCAGGTGTTCCCTGAAA  
CAGTTGCAGCTCAAAGGACTTCCAGTATGCGGTGAGACTTGTGTTGGGGGAACCTGCAACACTCCAGGCTGCACTTGCTCCTG  
GCCTGTTTGCACACGCAATGGCCTTCCTAGTTTGGCCGCATAA

### **B Oak1 amino acid sequence**

MAKFTVCLLLCLLLAAFVGA<sup>FGSELSDSHKTTLVNEIAEKMLQRKILDGVEATLVTDVAEKMFLRKMKAEAKTSE</sup>  
TADQVFLKQLQLKGLPVCGETCVGGTCNTPGCTCSWPVCTR<sup>NGLPSLAA\*</sup>

Purple – ER signal peptide, Black - N-terminal propeptide, Blue – N-terminal repeat, Green – kalata B1 domain, Red – C-terminal repeat

**Supp Fig 1: A) Oak1 DNA sequence used to make all mutant constructs. B) The amino acid sequence of the Oak1 precursor protein.**