

Table 1 Suppl. Intron numbers in *zinc/iron-regulated transporter-like proteins (ZIPs)* from *Arabidopsis thaliana*, *Oryza sativa*, *Lycopersicon esculentum*, *Capsicum annum*, and *Solanum tuberosum* predicted using the online *gene structure display server tool*.

Subgroup	Genes (number of introns)
I	XP_016553411.1(2), PHT78100.1(2), StZIP7(2), Solyc06g005620.3.1(2), AtIRT2(2), AtZIP2(1), OsZIP1(1), AtZIP11(1), OsZIP2(3), PHT77364.1(2), StZIP11(2)
II	OsZIP9(2), OsZIP5(2), OsZIP8(2)
III	AtZIP1(1), OsZIP3(2), OsZIP4(4)
IV	Solyc07g043200.2.1(2), StZIP8(2), PHT89272.1(2), StZIP1(2), PHT75645.1(2), StZIP10(2), PHT75648.1(2), StZIP9(2), Solyc07g043230.3.1(2)
V	AtZIP3(2), AtZIP5(2)
VI	StZIP5(2), Solyc02g081600.3.1(1), XP_016560246.1(2)
XI	OsZIP6(1), AtZIP6(1), XP_016573554.1(1), StZIP6(1), Solyc05g053370.3.1(1)

Table 2 Suppl. Primers of *Solanum tuberosum zinc/iron-regulated transporter-like protein (StZIP)* genes used for real-time PCR analysis.

Primer	Sequence (5'-3')
StZIP1-F	ATCGGAACGATGATGGTGGA
StZIP1-R	CATCGGTACCCTCCGATGAC
StZIP2-F	CGGAACGAAGCCTTTTCGTG
StZIP2-R	TCGAATGAGTCCGGTAGCAC
StZIP3-F	GCTACCGGACTCATTCGACA
StZIP3-R	TAGCGGACAACATAGCCACA
StZIP4-F	TGGCCAAATGGGCTTGATCT
StZIP4-R	GAAATTGAGTGGCGCAACAGT
StZIP5-F	TTGGAGTCATCCTCCCAATCC
StZIP5-R	CGCGAACGCCTTTATCAAGAA
StZIP6-F	TCGATTTGACGGCGACTTCT
StZIP6-R	TCACTATTCCCAACTGCCGC
StZIP7-F	CGACAACGTATGTTGCGTCC
StZIP7-R	ACATGTTGCTCGAGCTCTTCA
StZIP8-F	CGGCTCTTATCGTGGAAGGA
StZIP8-R	AAAAAGTCAACGAGCGCCAT
StZIP9-F	TGGTAGCGAGTGCTATTGGG
StZIP9-R	ACGGCGAAGTCAAGCTTTCA
StZIP10-F	GGGAGCCATCGCTTCCATT
StZIP10-R	GGCTTAAGGCCGGTATTGCT
StZIP11-F	TCAAGCCGATGCTTGAGAG
StZIP11-R	AGGCCGCGCATGATAGTAAA
StZIP12-F	CCGACTTGGTGTCGGAATCA
StZIP12-R	GAGTGCGAATGACCATGGGA

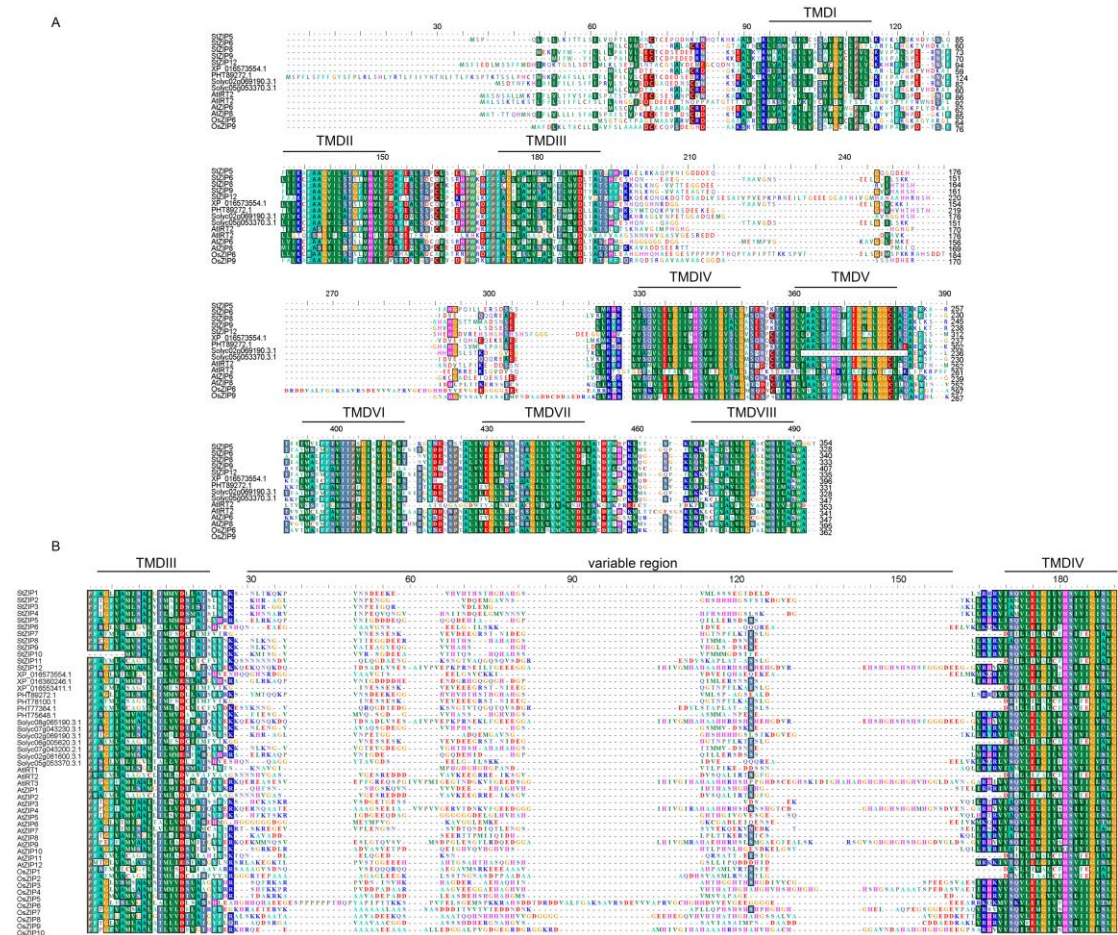


Fig. 1 Suppl. Multiple sequence alignment of zinc/iron-regulated transporter-like proteins (ZIPs). *A* -, Five potato ZIP proteins were predicted to have eight TMDs. Five ZIP proteins from potato, one ZIP protein from pepper, three ZIP proteins from tomato, four ZIP proteins from *Arabidopsis*, and two ZIP proteins from rice were aligned using *ChustalW 2.0*. TMDs are indicated by *lines above* the relevant sequences, and they are numbered from TMD I to TMD VIII. *B* - Variable regions of 12 ZIPs from potato, 10 ZIPs from tomato, 4 ZIPs from pepper, 15 ZIPs from *Arabidopsis*, and 10 ZIPs from rice. TMDIII, TMD IV, and the variable region are indicated using *lines above* the relevant sequences.