

Figure S5. Mercury sensitive site and pH regulation site in TIPs. Alignment of TIPs aquaporins for (A) mercury sensitive site (Cys residue) and (B) pH regulation site (His residue) for gating. Consensus sequences are framed and conserved residues are indicated as red triangle. TIPs cloned in the present study are marked with red arrows. Accession numbers of presented protein sequences are: *At-deltaTIP2* CAB10515), *At-gammaTIP3* (AAC62778), *At-alphaTIP* (AAC42249), *Pv-alphaTIP* (CAA44669), *VvPnTIP1;1* (CAO69259), *VvTnTIP1;1* (KJ697717), *VvPnTIP2;1* (CAO45860), *VvTnTIP2;1* (HQ913640), *VvPnTIP2;2* (CAO23095), *VvTnTIP2;2* (KJ697718), *VvPnTIP4;1* (CAO44039), *VvTnTIP4;1* (KJ697719). *At*: *Arabidopsis thaliana*, *Pv*: *Phaseolus vulgaris*, *VvPn*: *Vitis vinifera* cv. Pinot noir, *VvTn*: *V. Vinifera* (cv. Touriga nacional).

A

	VVAC	LLL	121
→	VvTnTIP1;1	VVAC	LLL
	VvPnTIP2;1	ILAC	FLL
	VvTnTIP2;1	ILAC	FLL
→	VvPnTIP2;2	IVAC	LLL
	VvTnTIP2;2	IVAC	LLL
	VvPnTIP4;1	TVAC	CILL
→	VvTnTIP4;1	TVAC	CILL
	At-deltaTIP2	IVAC	LLL
	At-gammaTIP3	VVAC	LLL
	At-epsilonTIP	SAAC	FLL

C

B

	TSAF	SLS	136
→	VvTnTIP1;1	TSAF	SLS
	VvPnTIP2;1	TPVH	SLG
	VvTnTIP2;1	TPVH	SLG
	VvPnTIP2;2	IPTH	GVA
→	VvTnTIP2;2	IPTH	GVA
	VvPnTIP4;1	TPVHTL	A
→	VvTnTIP4;1	TPVHTL	A
	At-deltaTIP2	VPTH	GVA
	At-gammaTIP3	TAAF	SLS
	At-epsilonTIP	TPVH	TLA
	Pv-alphaTIP	PSGF	HVS

H