**S2 Table. List of edges in the ABA induced closure network.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Start Node** | **End Node** | **Edge sign** | **Direct, indirect or inferred** | **Reference** |
| 8-nitro-cGMP | ADPRc | Positive | Indirect | [1] |
| ABH1 | CaIM | Negative | Inferred | [2] |
| ABI1 | pHc | Negative | Inferred | [3] |
| ABI1 | RBOH | Negative | Inferred | [4] |
| ABI1 | SLAC1 | Negative | Direct | [5-7] |
| ABI1 | AtRAC1 | Positive | Inferred | [8] |
| ABI2 | GHR1 | Negative | Direct | [9] |
| ABI2 | pHc | Negative | Inferred | [3] |
| ADPRc | cADPR | Positive | Direct |  |
| AGB1 | AGG3 | No sign, no direction | Direct | [10, 11] |
| AGG3 | AGB1 | No sign, no direction | Direct | [10, 11] |
| ARP Complex | Actin reorganization | Positive | Direct | [12, 13] |
| ABA | PEPC | Negative | Indirect | [14] |
| ABA | RCARs | Positive | Direct | [15, 16] |
| ABA | PI3P5K | Positive | Indirect | [17] |
| ABA | SPHK1/2 | Positive | Indirect | [18, 19] |
| Actin Reorganization | CaIM | Positive | Indirect | [20] |
| AnionEM | H2O Efflux | Positive | Indirect |  |
| Aquaporin (PIP2;1) | H2O Efflux | Positive | Direct | [21] |
| AtRAC1 | Actin Reorganization | Negative | Indirect | [8] |
| CIS | Ca2+c | Positive | Direct | [22, 23] |
| CPK23 | SLAH3 | Positive | Direct | [24, 25] |
| CPK23 | SLAC1 | Positive | Direct | [26] |
| CPK3/21 | SLAH3 | Positive | Direct | [24, 25] |
| CPK3/21 | CPK3/21 | Positive | Direct | [27] |
| ABI1 | OST1 | Negative | Direct | [7, 28, 29] |
| CPK 6 | SLAH3 | Positive | Direct | [25] |
| CPK 6 | SLAC1 | Positive | Direct | [6] |
| Ca2+c | MPK9/12 | Positive | Inferred | [30] |
| Ca2+c | Ca2+ ATPase | Positive | Direct | [31] |
| Ca2+c | KEV | Positive | Indirect | [32] |
| Ca2+c | QUAC1 | Positive | Inferred | [33] |
| Ca2+c | H+ ATPase | Negative | Direct | [34] |
| Ca2+c | Depolarization | Positive | Direct | [35] |
| Ca2+c | pHc | Positive | Indirect | [3] |
| Ca2+c | CPK 3/21 | Positive | Direct | [25] |
| Ca2+c | PLDα | Positive | Direct | [18] |
| Ca2+c | PLC | Positive | Direct | [36] |
| Ca2+c | TCTP | Positive | Direct | [37] |
| Ca2+ ATPase | Ca2+c | Negative | Direct | [31] |
| CaIM | Ca2+c | Positive | Direct | [38] |
| Depolarization | KOUT | Positive | Direct | [39] |
| ERA1 | CaIM | Negative | Inferred | [40] |
| GAPC1/2 | PLDδ | Positive | Direct | [41] |
| GCR1 | GPA1 | Negative | Direct | [42] |
| GEF1/4/10 | ROP11 | Positive | Direct | [43] |
| GHR1 | SLAC1 | Positive | Direct | [9] |
| GHR1 | CaIM | Positive | Inferred | [9] |
| GPA1 | AGB1 | No sign, no direction | Direct | [11] |
| GPA1 | RBOH | Positive | Inferred | [44] |
| GPA1 | PLDα | Positive | Direct | [45] |
| GTP | cGMP | Positive | Direct | [46] |
| H+ ATPase | Depolarization | Negative | Direct | [47] |
| H2O Efflux | Closure | Positive | Direct |  |
| HAB1 | OST1 | Negative | Direct | [28, 29] |
| InsP3 | CIS | Positive | Indirect | [22] |
| InsP6 | CIS | Positive | Indirect | [23] |
| K+ Efflux | H2O Efflux | Positive | Indirect | [39] |
| K+ efflux | Depolarization | Negative | Direct | [39] |
| KEV | K+ Efflux | Positive | Direct | [32] |
| KEV | Depolarization | Positive | Direct | [32] |
| KOUT | K+ Efflux | Positive | Direct | [39] |
| MPK9/12 | SLAC1 | Positive | Inferred | [30] |
| MPK9/12 | MPK9/12 | Positive | Direct | [48] |
| MRP5 | CaIM | Positive | Inferred | [49] |
| Malate | H2O Efflux | Negative | Indirect | [50] |
| Microtubule Depolymerization | Closure | Positive | Indirect | [51] |
| Microtubule  Depolymerization | Microtubule  Depolymerization | Positive | Direct | [52] |
| NAD+ | cADPR | Positive | Direct | [53] |
| NADPH | ROS | Positive | Direct |  |
| NADPH | NO | Positive | Direct | [54] |
| NIA1/2 | NO | Positive | Direct | [54] |
| NO | NOGC1 | Positive | Direct | [46] |
| NO | KOUT | Negative | Direct | [55] |
| NO | PLDδ | Positive | Inferred | [56] |
| NO | 8-nitro-cGMP | Positive | Indirect | [1] |
| NOGC1 | cGMP | Positive | Direct | [46] |
| Nitrite | NO | Positive | Direct | [54] |
| NtSyp121 | CaIM | Positive | Indirect | [57] |
| OST1 | pHc | Positive | Inferred | [3] |
| OST1 | QUAC1 | Positive | Direct | [58] |
| OST1 | RBOH | Positive | Direct | [59, 60] |
| PA | ABI1 | Negative | Direct | [61] |
| PA | RBOH | Positive | Direct | [62] |
| PA | SPHK1/2 | Positive | Direct | [63] |
| PC | PA | Positive | Direct | [64] |
| PEPC | Malate | Positive | Indirect | [14] |
| pHc | pHc | Negative | Inferred | [65-67] |
| PI3P5K | PtdIns(3,5)P2 | Positive | Direct | [17] |
| PtdIns(4,5)P2 | DAG | Positive | Direct |  |
| PtdIns(4,5)P2 | InsP3 | Positive | Direct |  |
| PLC | DAG | Positive | Direct |  |
| PLC | InsP3 | Positive | Direct |  |
| PLDα | PA | Positive | Direct | [61] |
| PLDδ | PA | Positive | Direct | [68] |
| PP2CA | OST1 | Negative | Direct | [5] |
| PP2CA | SLAC1 | Negative | Direct | [5] |
| PtdIns(3,5)P2 | V-PPase | Positive | Direct | [17] |
| PtdInsP3 | Actin | Positive | Inferred | [69] |
| PtdInsP3 | RBOH | Positive | Inferred | [69] |
| PtdInsP4 | Actin | Positive | Inferred | [70] |
| PtdInsP4 | PIP2 | Positive | Direct | [71] |
| QUAC1 | AnionEM | Positive | Direct | [72] |
| RBOH | ROS | Positive | Direct | [73] |
| RCARs | HAB1 | Negative | Direct | [74] |
| RCARs | ABI1 | Negative | Direct | [15, 16, 75] |
| RCARs | ABI2 | Negative | Direct | [15, 16] |
| RCARs | PP2CA | Negative | Direct | [76] |
| RCN1 | ROS | Positive | Inferred | [77] |
| ROP11 | ABI1 | Positive | Direct | [78] |
| ROP11 | ABI2 | Positive | Direct | [43] |
| ROS | KOUT | Negative | Indirect | [79] |
| ROS | H+ ATPase | Negative | Indirect | [80] |
| ROS | GHR1 | Positive | Inferred | [9] |
| ROS | ABI1 | Negative | Direct | [81] |
| ROS | NIA1/2 | Positive | Inferred | [82] |
| ROS | 8-nitro-cGMP | Positive | Indirect | [1] |
| S1P / PhytoS1P | S1P /PhytoS1P | Negative | Inferred | [19, 66, 67] |
| S1P / PhytoS1P | GPA1 | Positive | Inferred | [19] |
| SCAB1 | Actin Depolymerization | Positive | Direct | [83] |
| SLAC1 | AnionEM | Positive | Direct | [7, 84] |
| AnionEM | Depolarization | Positive | Direct | [85] |
| AnionEM | Malate | Negative | Direct | [72, 84] |
| SLAH3 | AnionEM | Positive | Direct | [24, 84] |
| SPHK1/2 | S1P/phytoS1P | Positive | Direct | [63] |
| TCTP | Microtubule Depolymerization | Positive | Direct | [37] |
| V-PPase | Vacuolar Acidification | Positive | Direct | [17] |
| Vacuolar Acidification | pHc | Positive | Direct | [17] |
| Vacuolar Acidification | KEV | Positive | Indirect | [32] |
| cADPR | CIS | Positive | Indirect | [86, 87] |
| cGMP | 8-nitro-cGMP | Positive | Direct | [1] |
| pHc | KOUT | Positive | Indirect | [88] |
| pHc | H+ ATPase | Negative | Indirect | [89] |
| pHc | RBOH | Positive | Inferred | [65] |
| pHc | SLAC1 | Positive | Inferred | [90] |
| pHc | ABI1 | Positive | Direct | [91] |
| ROS | HAB1 | Negative | Direct | [92] |
| ROS | PP2CA | Negative | Direct |  |
| Ca2+c | V-ATPase | Positive | Indirect | [93] |
| V-ATPAse | Vacuolar Acidification | Positive | Direct | [17] |
| ROS | ABI2 | Negative | Direct | [94] |
| InsP3 | InsP6 | Positive | Direct | [95] |
| ROS | PLDδ | Positive | Inferred | [41] |
| DAGK | PA | Positive | Direct | [96] |
| DAG | PA | Positive | Direct | [96] |
| Sph | S1P/PhytoS1P | Positive | Direct | [19] |
| SPP1 | S1P/PhytoS1P | Negative | Direct | [97] |
| ABA | AtRAC1 | Negative | Indirect | [8] |
| ABI2 | OST1 | Negative | Direct | [29] |
| CPK3/21 | SLAC1 | Positive | Direct | [26] |
| OST1 | SLAC1 | Positive | Direct | [7] |
| ABI2 | SLAC1 | Negative | Direct | [26] |
| ABI1 | SLAH3 | Negative | Direct | [24] |
| ABA | Malate | Negative | Indirect | [50] |
| OST1 | Aquaporin (PIP2;1) | Positive | Direct | [21] |
| ERA1 | ROP10 | Positive | Direct | [98] |

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