

**Supplemental Table S5. KEGG EC and KO numbers for potential cytokinin biosynthesis and adenine salvage enzymes**

| Enzyme Function                                       | KEGG EC Number             | KEGG KO Number                         | Enzyme  | Abbreviation           |
|---|----------------------------|--|---|------------------------|
| <b>cytokinin biosynthesis</b>                         | EC: 2.5.1.27, EC:2.5.1.112 | K10760                                 | adenylate dimethylallyltransferase                            | IPT                    |
| <b>tRNA modifying</b>                                 | EC: 2.5.1.75               | K00791                                 | tRNA dimethylallyltransferase                                 | TRIT1, miaA            |
|   | EC: 2.8.4.3                | K06168                                 | tRNA (N6-isopentenyl adenosine(37)-C2)-methylthiotransferase  | CDK5RAP1, miaB         |
|   | EC:1.14.99.69              | K06169                                 | tRNA 2-(methylsulfanyl)-N6-isopentenyladenosine37 hydroxylase | miaE                   |
| <b>Adenine Salvage</b>                                | EC: 3.1.3.5                | K01081, K19970, K03787, K11751, K08693 | 5'- nucleotidase  | NT5E, ushA, surE, yfkN |
|   | EC: 3.2.2.1                | K01239                                 | purine nucleosidase   |                        |
|   | EC: 3.2.2.-                | K22522                                 | cytokinin riboside 5'-monophosphate phosphoribohydrolase      | LOG                    |
|   | EC:2.4.2.1                 | K03783, K03784, K09913                 | purine-nucleoside phosphorylase                               | punA                   |
|   | EC:2.7.1.20                | K00856                                 | adenosine kinase  | ADK                    |
|   | EC:2.4.2.7                 | K00759                                 | adenine phosphoribosyltransferase                             | APRT                   |
|   | EC:3.2.2.4                 | K01241, K06966                         | AMP nucleosidase  | amn                    |
| <b>formation of O- and N-glucosides of cytokinins</b> | EC:2.4.1.203               | K13492                                 | zeatin O-glucosyltransferase                                  | ZOG1                   |
|   | EC:2.4.1.215               | K13495                                 | cis-zeatin O-glucosyltransferase                              | CISZOG                 |
|   | EC:2.4.1.-                 | K13496, K23452                         | UDP-glucosyltransferase 73C & 85A                             | UGT73C UGT85A          |
|   | EC:2.4.2.40                | K13494                                 | zeatin O-xylosyltransferase                                   | ZOX1                   |
|   | EC:2.4.1.-                 | K13493                                 | cytokinin-N-glucosyltransferase                               | UGT76C1_2              |
| <b>inactivate CKs</b>                                 | EC:1.5.99.12               | K00279-7                               | cytokinin dehydrogenase/oxidase                               | CKX                    |