Representative SABATH queries.

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| **Enzyme** | **Organism** | **Accession Number** | **Systematic Name** |
| AtBSMT1 | *Arabidopsis thaliana* | AAY25461.1 | S-adenosyl-L-methionine:benzoic acid carboxyl methyltransferase |
| AtJMT | *Arabidopsis thaliana* | AAG23343.1 | S-adenosyl-L-methionine:jasmonic acid carboxyl methyltransferase |
| AtFAMT | *Arabidopsis thaliana* | AAN12945.1 | S-adenosyl-L-methionine:farnesoic acid carboxyl methyltransferase |
| AtIAMT | *Arabidopsis thaliana* | BAD43349.1 | S-adenosyl-L-methionine:salicylic acid carboxyl 1 methyltransferase |
| AtGAMT1 | *Arabidopsis thaliana* | AEE85196.1 | S-adenosyl-L-methionine:gibberellic acid methyltransferase 1 |
| AtGAMT2 | *Arabidopsis thaliana* | BAB11257.1 | S-adenosyl-L-methionine:gibberellic acid methyltransferase 2 |
| CCS1 | *Coffea arabica* | BAC43760.1 | S-adenosyl-L-methionine:xanthosine N7-methyltransferase |
| CbSAMT | *Clarkia breweri* | AAF00108.1 | S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase |

Representative SABATH sequences and their accession numbers.

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| **SABATH** | **Species** | **Accession #** | **NCBI Definition** |
| AbSAMT | *Atropa belladonna* | BAB39396.1 | S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase  |
| AlBSMT | *Arabidopsis lyrata* | AAP57211.1 | Methyl transferase  |
| AmBAMT | *Antirrhinum majus* | AAF98284.1 | SAM:benzoic acid carboxyl methyltransferase  |
| AmSAMT | *Antirrhinum majus* | AAN40745.1 | S-adenosyl-L-methionine:salicylic acid methyltransferase  |
| AtBSMT1 | *Arabidopsis thaliana* | AAY25461.1 | S-adenosyl-L-methionine:carboxyl methyltransferase |
| AtFAMT | *Arabidopsis thaliana* | AAN12945.1 | SAM dependent carboxyl methyltransferase |
| AtGAMT1 | *Arabidopsis thaliana* | AEE85196.1 | Arabidopsis thaliana GAMT1  |
| AtGAMT2 | *Arabidopsis thaliana* | BAB11257.1 | Arabidopsis thaliana AMT2  |
| AtIAMT | *Arabidopsis thaliana* | BAD43349.1 | S-adenosyl-L-methionine:salicylic acid carboxyl 1 methyltransferase-like protein |
| AtJMT | *Arabidopsis thaliana* | AAG23343.1 | S-adenosyl-L-methionine:jasmonic acid carboxyl methyltransferase  |
| BTS1 | *Theobroma cacao* | BAE79730.1 | Caffeine synthase  |
| CaDXMT1 | *Coffea arabica* | BAC75663.1 | 3,7-dimethylxanthine N-methyltransferase  |
| CaJMT | *Capsicum annuum* | ABB02661.1 | Jasmonic acid carboxyl ethyltransferase  |
| CaMXMT | *Coffea arabica* | BAC75664.1 | 7-methylxanthine N-methyltransferase  |
| CaXMT1 | *Coffea arabica* | BAB39215.1 | Xanthosine methyltransferase  |
| CbSAMT | *Clarkia breweri* | AAF00108.1 | S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase  |
| CCS1 | *Coffea arabica* | BAC43760.1 | Caffeine synthase 1  |
| CTS2 | *Coffea arabica*  | BAC43757.1 | Theobromine synthse 2  |
| HcSAMT | *Hoya carnosa* | CAI05934.1 | S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase  |
| ICS1 | *Camellia irrawadiensis* | BAE79729 | Theobromine synthase  |
| NsBSMT | *Nicotiana suaveolens* | CAF31508.1 | S-adenosyl-L-methionine:benzoic acid/salicylic acid carboxyl methyltransferase  |
| OsBSMT1 | *Oryza sativa* | XM\_467504.1 | Putative S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase |
| OsIAMT1 | *Oryza sativa* | ABZ04474.1 | Indole-3-acetic acid methyltransferase  |
| PcCS | *Paullinia cupana* var. sorbilis | DAA64605.1 | TPA\_exp: caffeine synthase  |
| PCS1 | *Camellia ptilophylla* | BAE79732.1 | Theobromine synthase  |
| PhBSMT | *Petunia hybrida* | AAO45012.1 | S-adenosyl-L-methionine:benzoic acid/salicylic acid carboxyl methyltransferase  |
| PtIAMT1 | *Populus trichocarpa* | XP\_002298843.1 | S-adenosyl-L-methionine:carboxyl methyltransferase family protein  |
| PtJMT | *Populus trichocarpa* | EEE94667.1 | Jasmonic acid carboxyl methyltransferase family protein |
| SfSAMT | *Stephanotis floribunda* | CAC33768.1 | S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase  |
| SlSAMT | *Solanum lycopersicum* | NP\_001234809.1 | S-adenosyl-L-methionine: salicylic acid carboxyl methyltransferase  |
| TCS1-DMXMT | *Camellia sinensis* | BAB12278.1 | Caffeine synthase  |

Putative *Citrus sinensis* SABATH enzymes, accession numbers and inferred phylogenetic grouping.

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| **CsSABATH** | **Accession #** | **Clade** |
| CsSABATH1 | XP\_006466836.1 | SAMT |
| CsSABATH2 | XP\_006473538.1 | JMT |
| CsSABATH3 | XP\_006478462.1 | JMT |
| CsSABATH4 | XP\_006478459.1 | JMT |
| CsSABATH5 | XP\_006474991.1 | IAMT |
| CsSABATH6 | XP\_006488971.1 | GAMT |
| CsSABATH8 | XP\_006490618.1 | FAMT |
| CsSABATH9 | XP\_006492576.1 | FAMT |
| CsSABATH10 | orange1.1g037735m | FAMT |
| CsSABATH11 | XP\_006471103.1 | FAMT |
| CsSABATH13 | XP\_006491899.1 | FAMT |
| CsSABATH14 | XP\_006471128.1 | FAMT |
| CsSABATH15 | XP\_006482177.1 | FAMT |
| CsSABATH16 | XP\_006482395.1 | FAMT |
| CsSABATH17 | XP\_006482178.1 | UNK |
| CsSABATH18 | XP\_006469324.1 | UNK |
| CsSABATH19 | XP\_006469326.1 | UNK |
| CsSABATH20 | orange1.1g044174m | BMST |
| CsSABATH21 | XP\_006471193.1 | BMST |
| CsSABATH22 | XP\_006471194.1 | BMST |
| CsSABATH23 | XP\_006471192.1 | XMT sister clade |
| CsSABATH24 | XP\_006469450.1 | XMT sister clade |
| CsSABATH25 | XP\_006469449.1 | XMT sister clade |
| CsSABATH26 | XP\_006469479.1 | XMT sister clade |
| CsSABATH27 | XP\_006469448.1 | XMT sister clade |
| CsSABATH28 | orange1.1g044727m | XMT sister clade |
| CsSABATH29 | orange1.1g036911m | XMT sister clade |
| CsSABATH30 | XP\_006486358.1 | Outgroup |
| CsSABATH31 | XP\_006470353.1 | Outgroup |