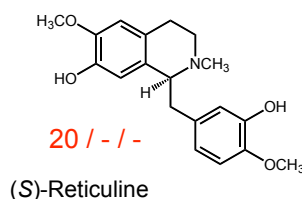
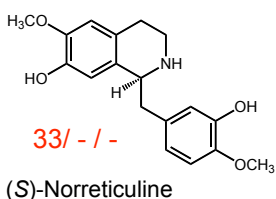
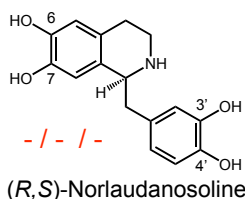
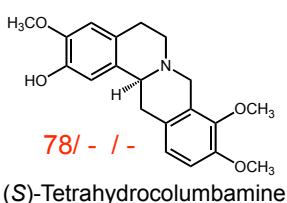
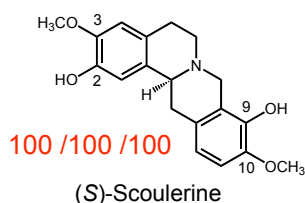


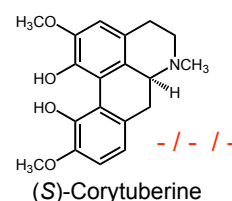
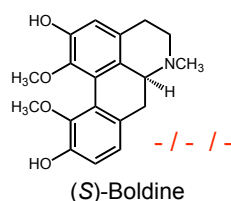
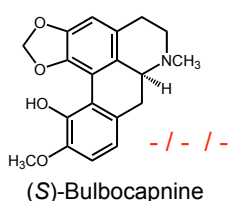
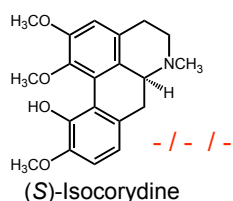
Simple benzylisoquinoline



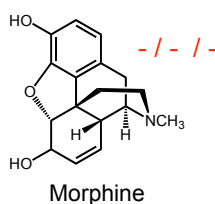
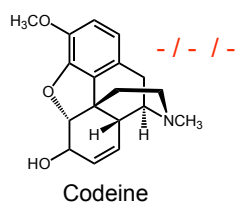
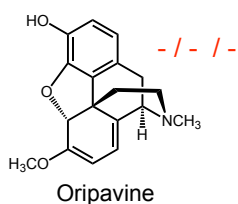
Protoberberine



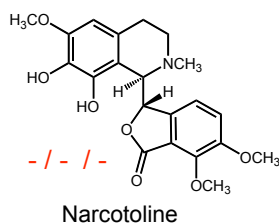
Aporphine



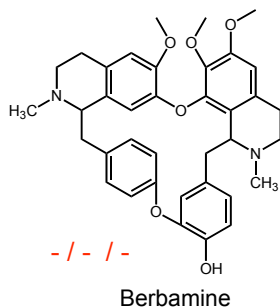
Morphinan



Phthalideisoquinoline



Bisbenzylisoquinoline



Supplemental Figure 2. Substrate specificities of recombinant SOMT1, SOMT2, and SOMT3. Activity was based on the radioactivity recovered in an organic solvent phase extraction from aqueous enzyme assays, which resulted in the demethylation of [*methyl*-¹⁴C]SAM and the relative *O*-methylation of the potential substrate. Enzyme assays were performed using a reaction mixture of 100 mM glycine-NaOH, pH 9.0, 25 mM sodium ascorbate, 100 μM SAM (10% mole/mole (n/n) [*methyl*-¹⁴C]SAM (specific activity 55 mCi/mmol) and 90% (n/n) unlabeled SAM), 10% (v/v) glycerol, 1 mM β-mercaptoethanol, 100 μM of the potential alkaloid substrate and 5 μg of purified recombinant enzyme. The structures of compounds tested as potential enzymatic substrates are beside values indicating the percent relative activities for SOMT1, SOMT2, and SOMT3, respectively. Relative substrate specificity was calculated as a percentage of the conversion of each substrate compared with the conversion of (*S*)-scoulerine. Hyphens represent absence of detectable activity.