

Substrate (added to the microbial culture)



Product (in the supernatant)

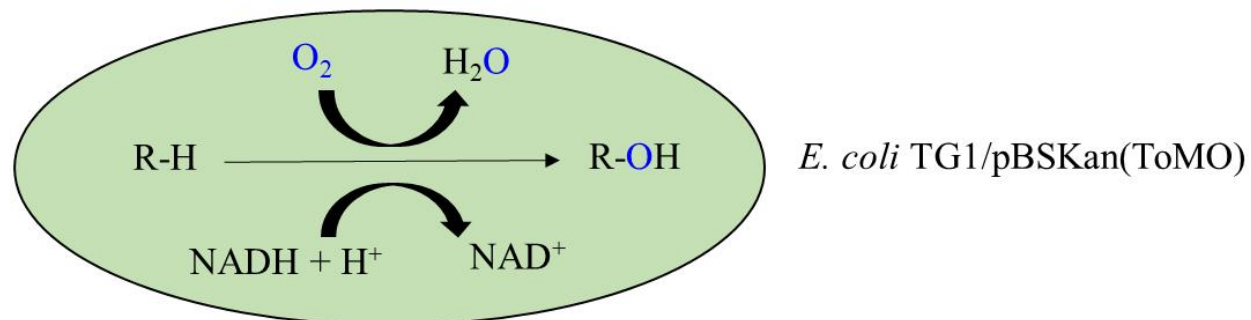


Fig. S1 *E. coli* strain TG1 expressing ToMO in pBS(Kan)ToMO (9) produces blue colored indigo resulting from the oxidation of indole generated by tryptophanase activity in TG1 cells (29). The aromatic substrate (R-H) is added to the culture expressing ToMO and enters the cell. ToMO incorporates a single atom of molecular oxygen (O_2) into the aromatic substrate while the other O atom is reduced to water with electrons from NADH which is provided by the cell. The product (R-OH) leaves the cell and can be detected from the culture supernatant.