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Supporting Information

Discrimination of the prochiral hydrogens at the C-2 position of *n*alkanes by methane/ammonia monooxygenase family proteins

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1 15. STATE I CHANNEL PRODUCTION IN *n*-pentane oxidation by AMO-Ne.

 $(\mathfrak{A}, \mathfrak{D})$: 2-pentanol; \mathbf{O} , \mathbf{O} : 1-pentanol. Arrows indicate axis of data. The reaction was carried out at 30 °C in 50 mM phosphate buffer (pH 7.0) containing 1.2 mM duroquinol, and 4.5 g-wet cells L⁻¹ whole cells. The initial concentration of *n*-pentane (dissolved) was 92 μ M.



1 15. STUD ITCAMO PIOLACION IN *n*-hexane oxidation by AMO-Ne.

 $(\mathfrak{A}, \mathfrak{D})$: 2-hexanol; \mathbf{O} , \mathbf{O} : 1-hexanol. Arrows indicate axis of data. The reaction was carried out at 30 °C in 50 mM phosphate buffer (pH 7.0) containing 1.2 mM duroquinol, and 4.5 g-wet cells L⁻¹ whole cells. The initial concentration of *n*-hexane (dissolved) was 60 μ M.



rig. 51(C) repranor production in *n*-heptane oxidation by AMO-Ne.

 $\mathfrak{SR}, \mathfrak{SD}: 2$ -heptanol; $\mathbf{O}, \mathbf{O}: 1$ -heptanol. Arrows indicate axis of data. The reaction was carried out at 30 °C in 50 mM phosphate buffer (pH 7.0) containing 1.2 mM duroquinol, and 4.5 g-wet cells L⁻¹ whole cells. The initial concentration of *n*-heptane (dissolved) was 38 μ M.



гид. этци останог риоцисион ин *n*-octane oxidation by AMO-Ne.

 \mathfrak{SR} , \mathfrak{SD} : 2-heptanol; \mathbf{O} , \mathbf{O} : 1-heptanol. Arrows indicate axis of data. The reaction was carried out at 30 °C in 50 mM phosphate buffer (pH 7.0) containing 1.2 mM duroquinol, and 4.5 g-wet cells L⁻¹ whole cells. The initial concentration of *n*-heptane (dissolved) was 31 μ M.



Fig. S2 Chromatograms of Chiraldex G-TA column analyzing the 2-alcohol enantiomers in C4-C8 *n*-alkane oxidations by AMO-Ne. (A) 2-Butanol (B) 2-Pentanol (C) 2-Hexanol (D) 2-Heptanol (E) 2-Octanol.