Identification of gene for a novel δ-hexachlorocyclohexane-metabolizing LinA-type3 dehydrochlorinase from metagenome of an HCH-contaminated soil

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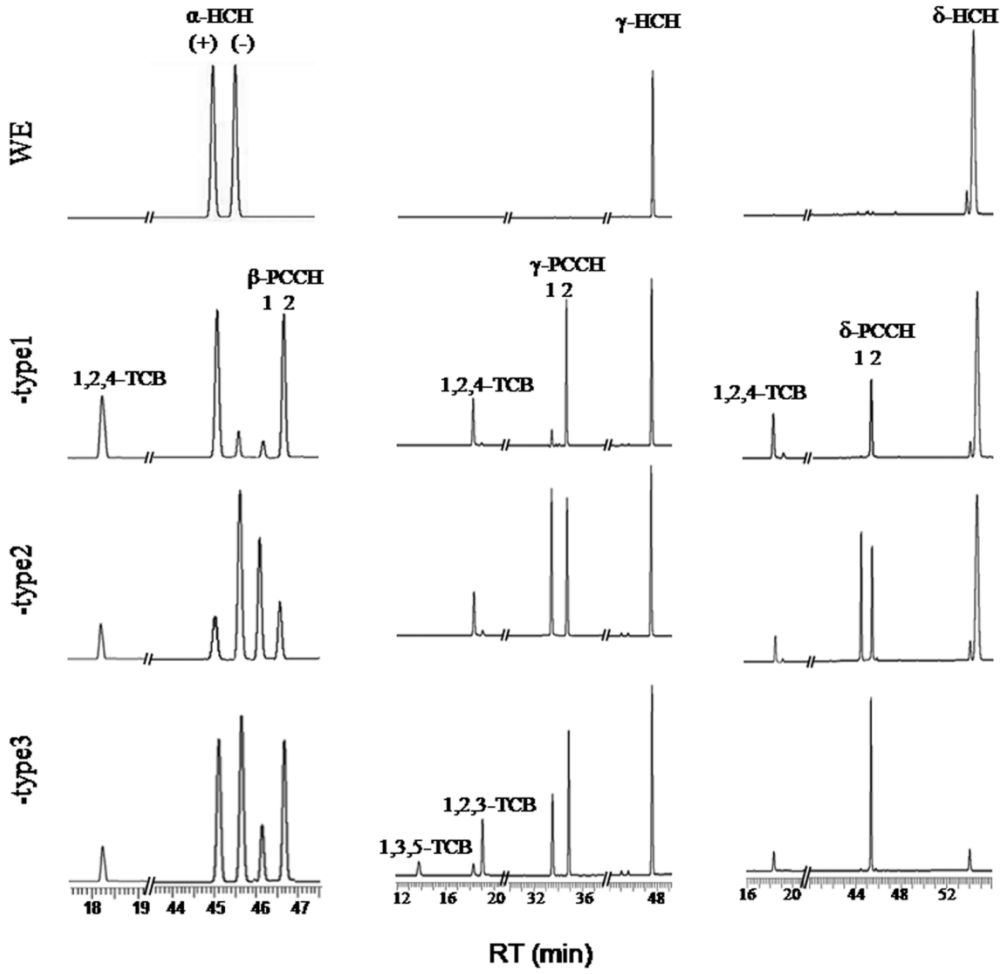

FIG S1: Gas chromatograms depicting enantioselective transformation of α-HCH, γ-HCH and δ-HCH by LinA-type1, -type2 and –type3. WE represents sample that were incubated without any enzyme in the reaction mixture.

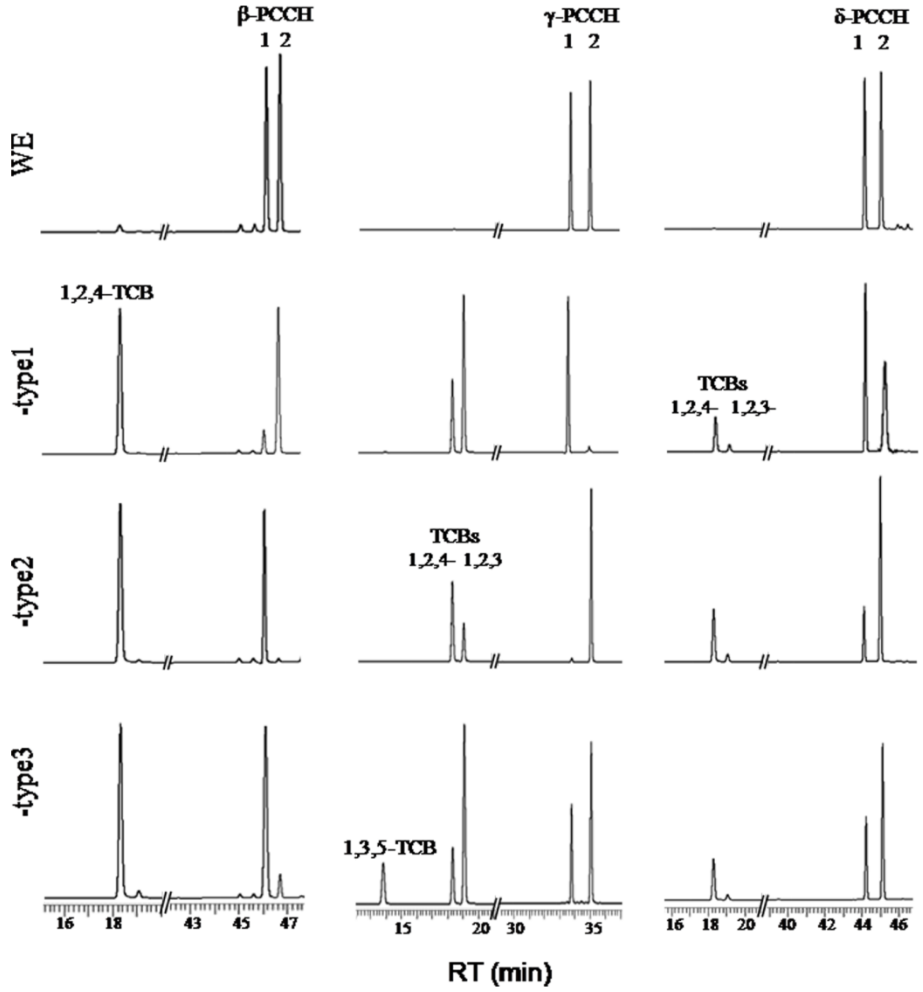

FIG S2: Gas chromatograms depicting enantioselective transformation of α-PCCH, γ-PCCH and δ-PCCH by LinA-type1, -type2 and –type3. WE represents sample that were incubated without any enzyme in the reaction mixture.

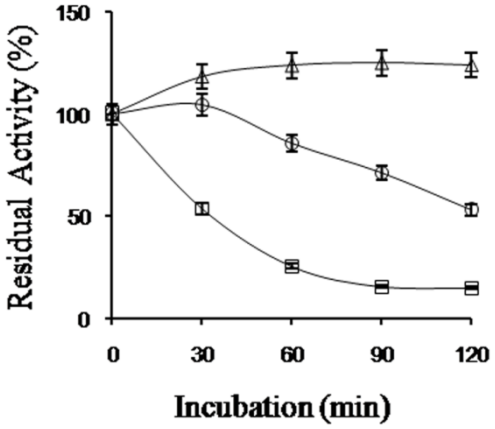

FIG S3: Residual activity of different LinA variants, after their pre-incubation at 60°C for 0-120 min. Symbols are LinA-type1 (square), LinA-type2 (triangle) and LinA-type3 (circle)

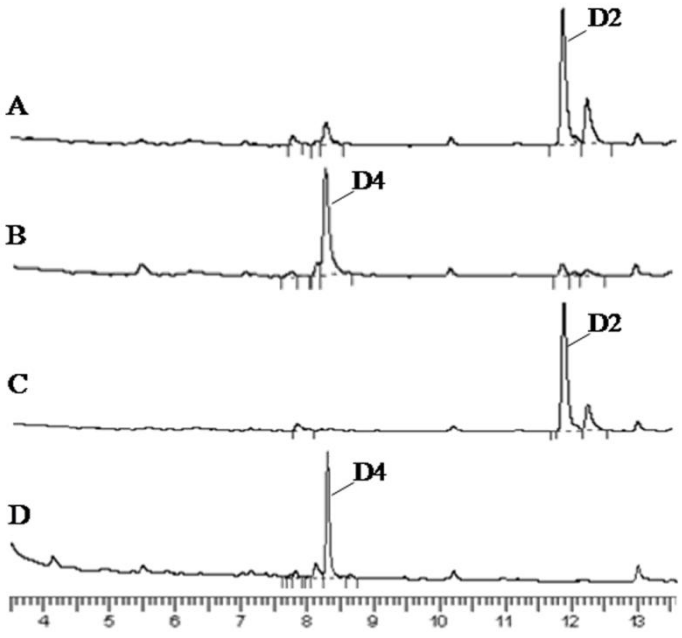

FIG S4. GC analysis of the metabolism of δ-HCH by combination of LinA-type1 and LinB (A), by combination of LinA-type3 and LinB (B), and by LinB alone (C). Metabolism of δ-PCCH by LinB alone is also shown (D).