SUPPORTING INFORMATION

The catalytic Serine of MCP hydrolases is activated differently for C-O bond cleavage than for C-C bond cleavage.

Antonio C. Ruzzini, Geoff P. Horsman[†], and Lindsay D. Eltis*

Departments of Biochemistry and Molecular Biology and Microbiology and Immunology, University of British Columbia, 2350 Health Sciences Mall, Vancouver, British Columbia, V6T 1Z3, Canada.

Present address
[†]Department of Chemistry, Wilfrid Laurier University, Waterloo, Ontario, Canada

Corresponding author
Lindsay D Eltis – leltis@mail.ubc.ca

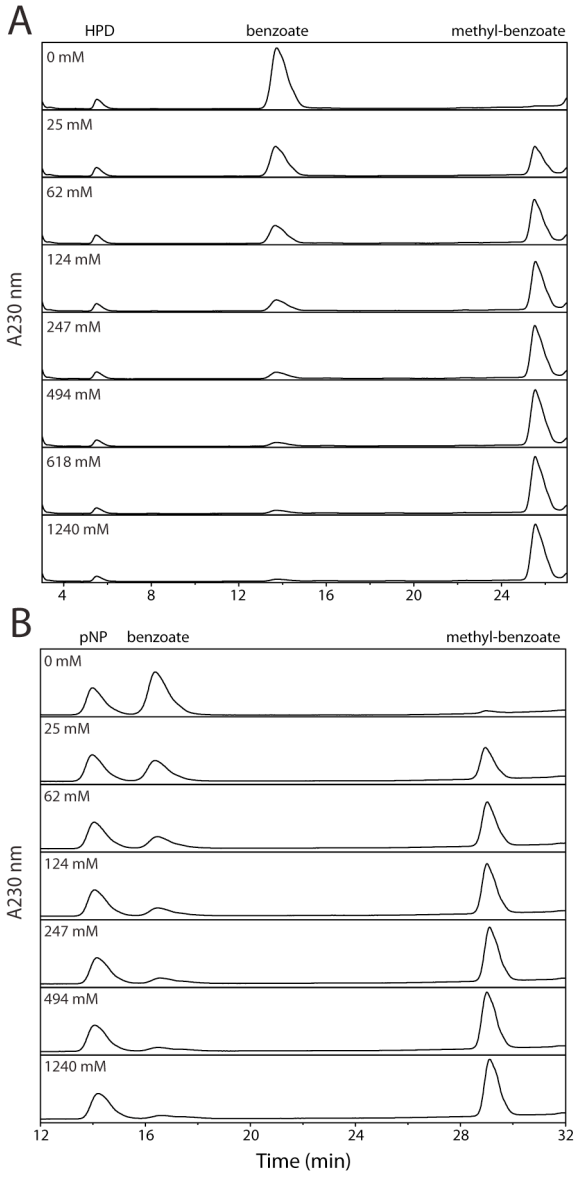

Figure S1. HPLC analysis of BphD-mediated methanolysis products. Representative chromatograms from the cleavage of HOPDA (A) and pNPB (B). The retention times of benzoate and methyl-benzoate are shifted in (B) with respect to (A) as a result of the instrument setup: a larger injection loop was used for the analysis of pNPB-derived products. The concentration of methanol used in each assay is inset on the left hand side of each panel.

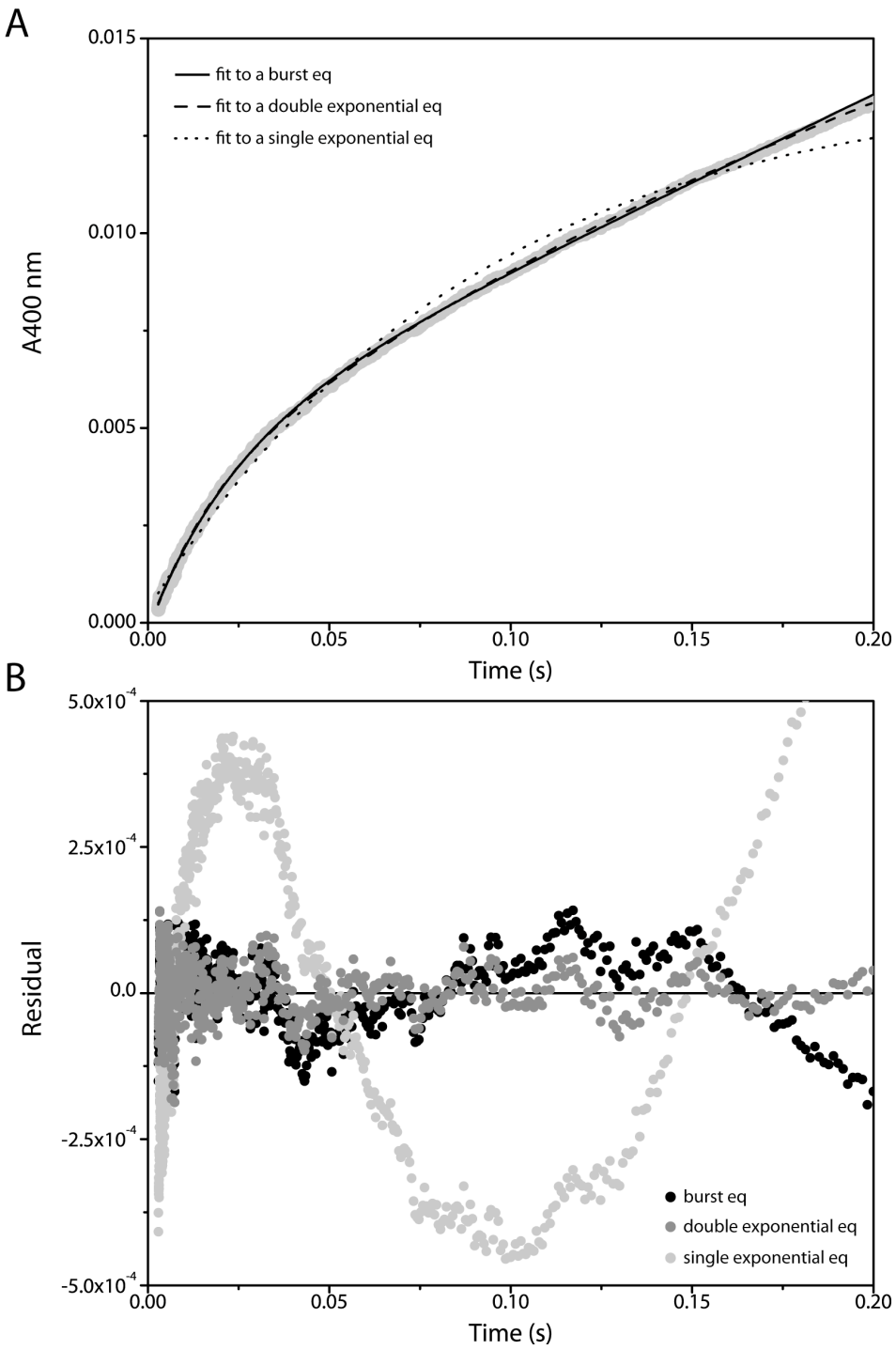

Figure S2. Representative stopped-flow experiment monitoring the turnover of 2 μM pNPB by 0.5 μM BphD in potassium phosphate (I = 0.1 M), pH 7.5 supplemented with 0.2% acetone. The production of pNP was monitored at 400 nm. (A) The thick grey line represents the data points. The black lines represent fits using each of three indicated equations. (B) The residual plot from each fit shown in (A). The overall residual values for both the fit to a burst and double exponential equation are on the same order of magnitude, however, the plot for the later is less random due to the occurrence of an additional fitted parameter in the model.