

Supplementary information

Deciphering of mitochondrial cardiolipin oxidative signaling in cerebral ischemia-reperfusion

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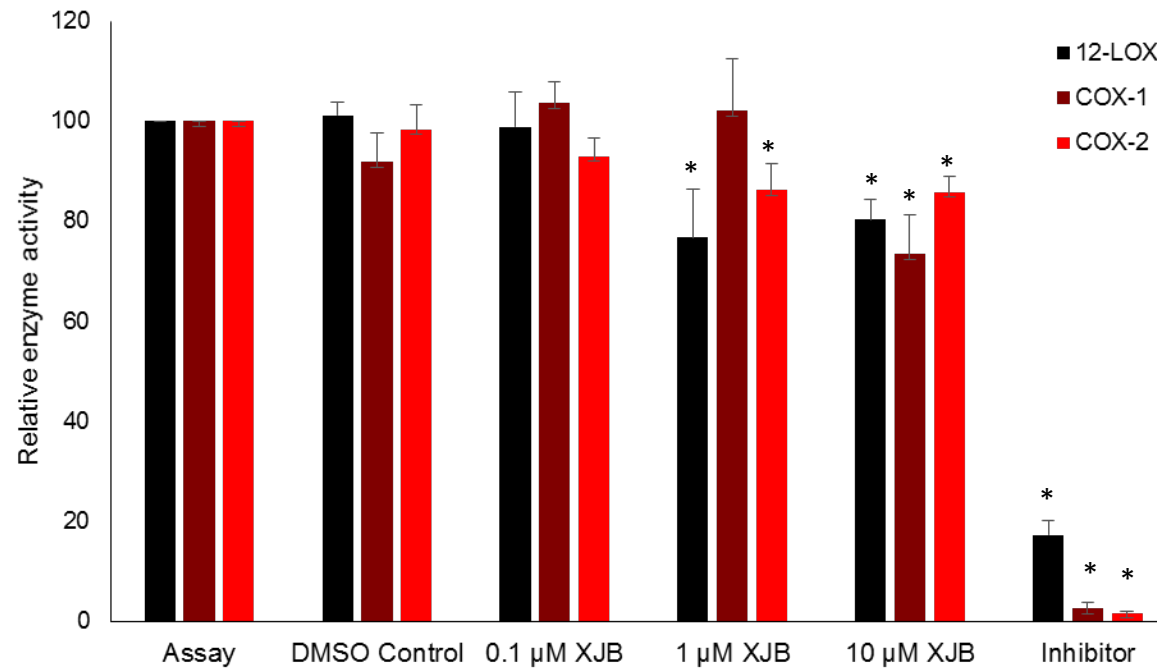


Figure S1. Effect of XJB-5-131 (XJB) on enzymatic activity of cyclooxygenase (COX) 1 and 2 and 12-lipoxygenase (LOX). Linoleic acid (20 μM) was incubated with recombinant mouse 12-LOX, recombinant human COX-1 or COX-2 for 30 minutes with various concentrations of XJB and LOX and COX specific inhibitors, licoferone and piroxicam (10 μM each), respectively. DMSO control corresponds to 0.5% DMSO as in all other XJB and inhibitor experiments. All the values are relative to the control activity of corresponding enzyme and average of three experiments. * $P < 0.05$ vs. Assay and DMSO control.

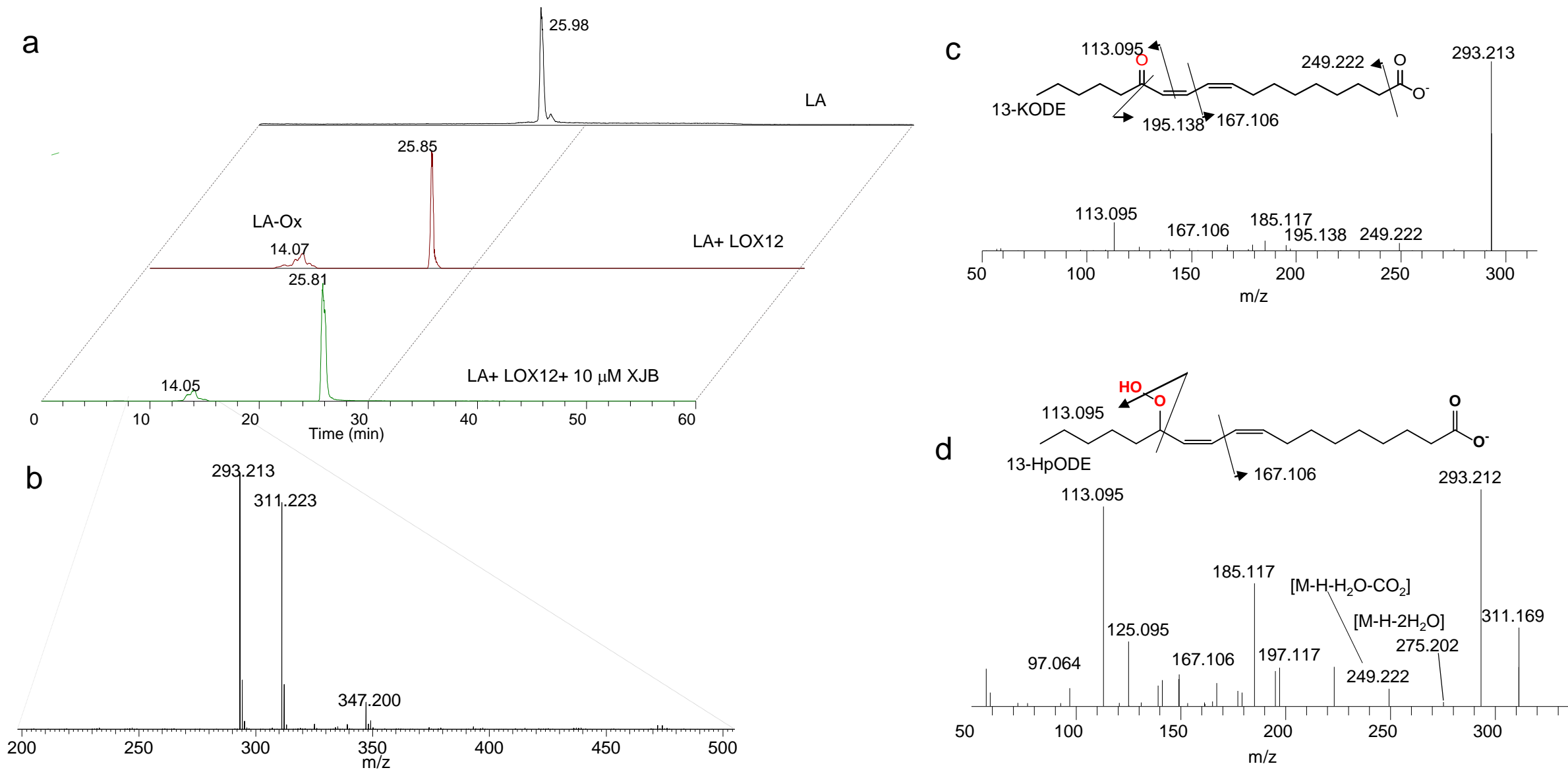


Figure S2. Linoleic acid (LA) oxidation using recombinant 12-lipoxygenase (LOX) and the effect of XJB-5-131 (XJB). The chromatogram of LA, LA incubated with 12-LOX, LA incubated with 12-LOX and 10 μ M of XJB (**a**). The Mass spectrum showed m/z 293.213, and 311.223 as the major oxidation products (**b**). These were further confirmed as 13-KODE and 13 HpODE respectively by fragmentation (**c, d**).

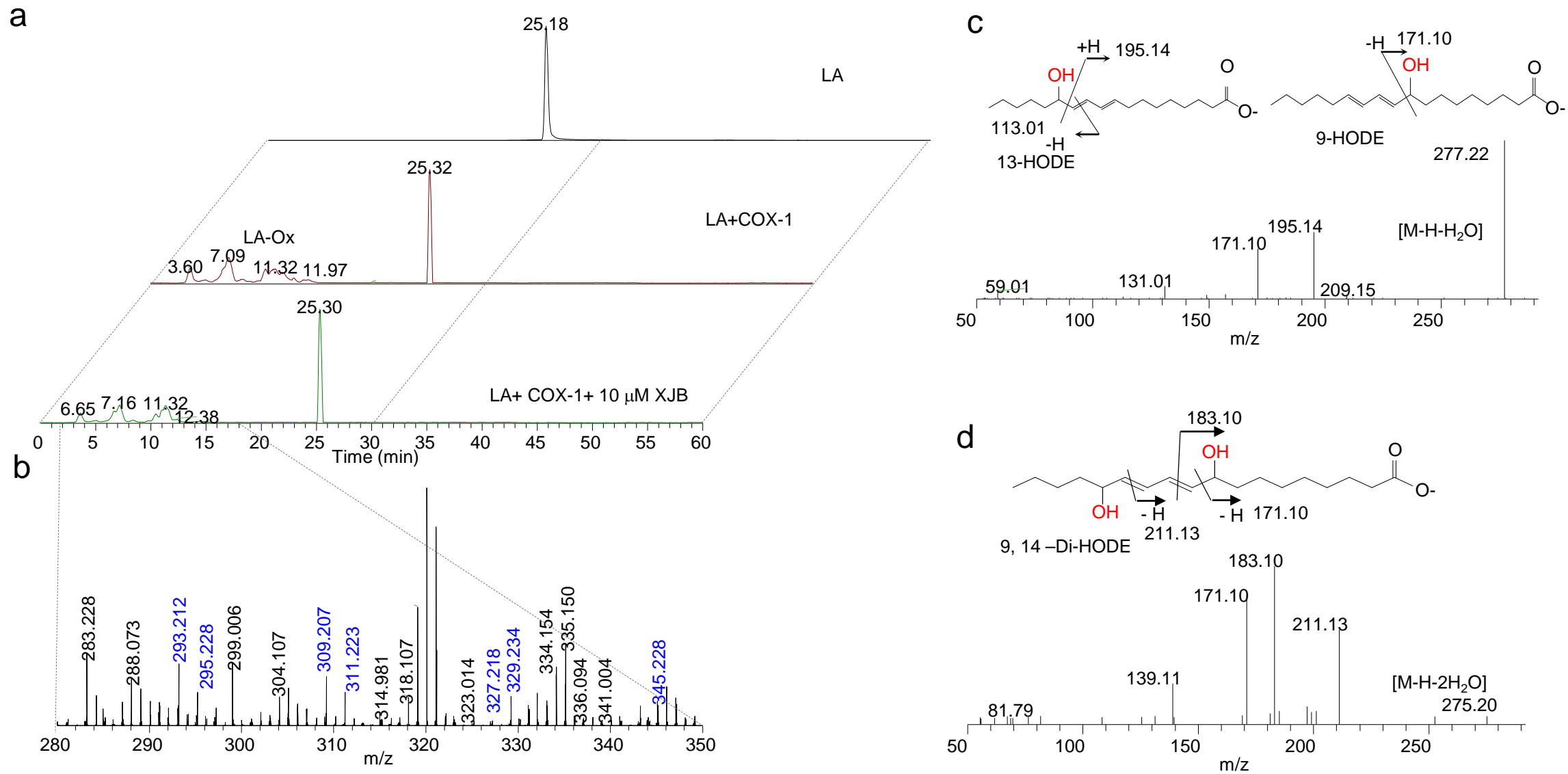


Figure S3. Linoleic acid (LA) oxidation using recombinant COX-1 and the effect of XJB-5-131 (XJB). The chromatogram of LA, LA incubated with COX-1, LA incubated with COX-1 and 10 μ M of XJB (**a**). The Mass spectrum showed various oxidation products such as KODE (293.212), HODE (295.228), EpOME (295.228), HpOME (311.223), DiHODE (311.223), (marked with blue labels) (**b**). The m/z 295.228 ion was further identified as 13-HODE and 9-HODE (**c**) and 311.223 as (9, 14, DiHODE) by fragmentation (**d**).

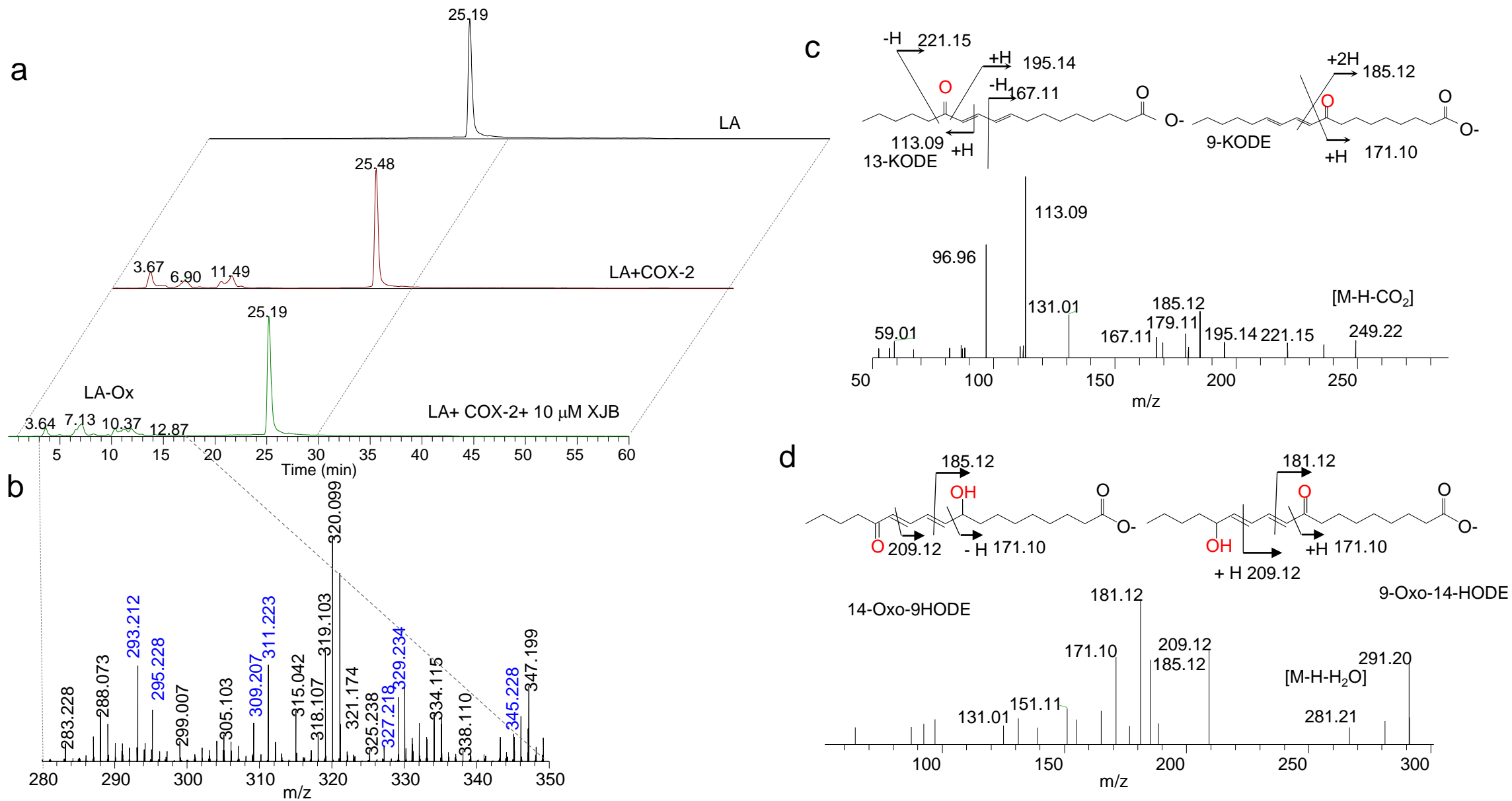


Figure S4. Linoleic acid (LA) oxidation using recombinant COX-2 and the effect of XJB-5-131 (XJB). The chromatogram of LA, LA incubated with COX-2, LA incubated with COX-2 and 10 μM of XJB (**a**). The Mass spectrum showed various oxidation products such as KODE (293.212), HODE (295.228), EpOME (295.228), HpOME (311.223), DiHODE (311.223) (marked with blue labels) (**b**). The m/z 293.212 ion was further identified as 13-kODE and 9-KODE (**c**) and 309.207 as (9-Oxo-14-HODE) and (14-Oxo-19-HODE) by fragmentation (**d**).