SUPPLEMENTARY FILE

Cyp2c44 epoxygenase-derived epoxyeicosatrienoic acids in vascular smooth muscle cells elicit vasoconstriction of the murine ophthalmic artery

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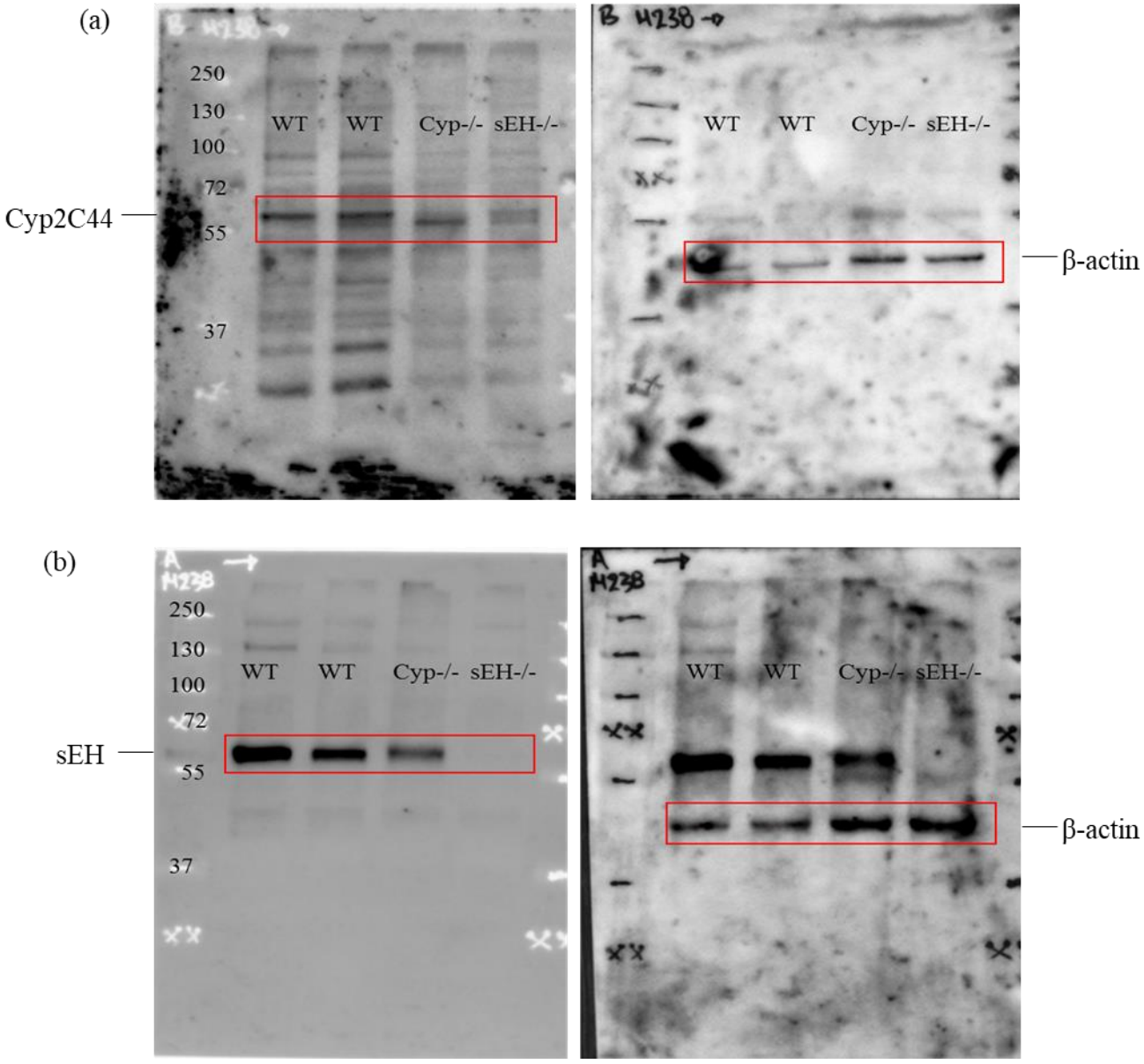
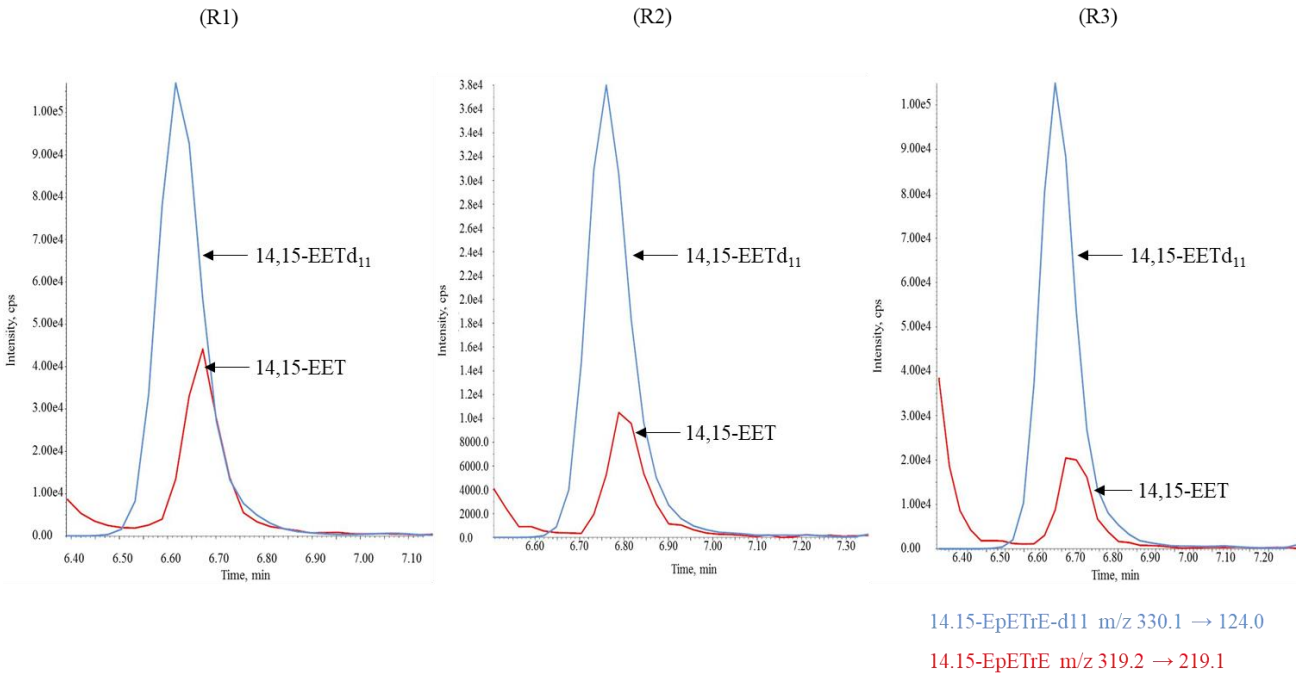
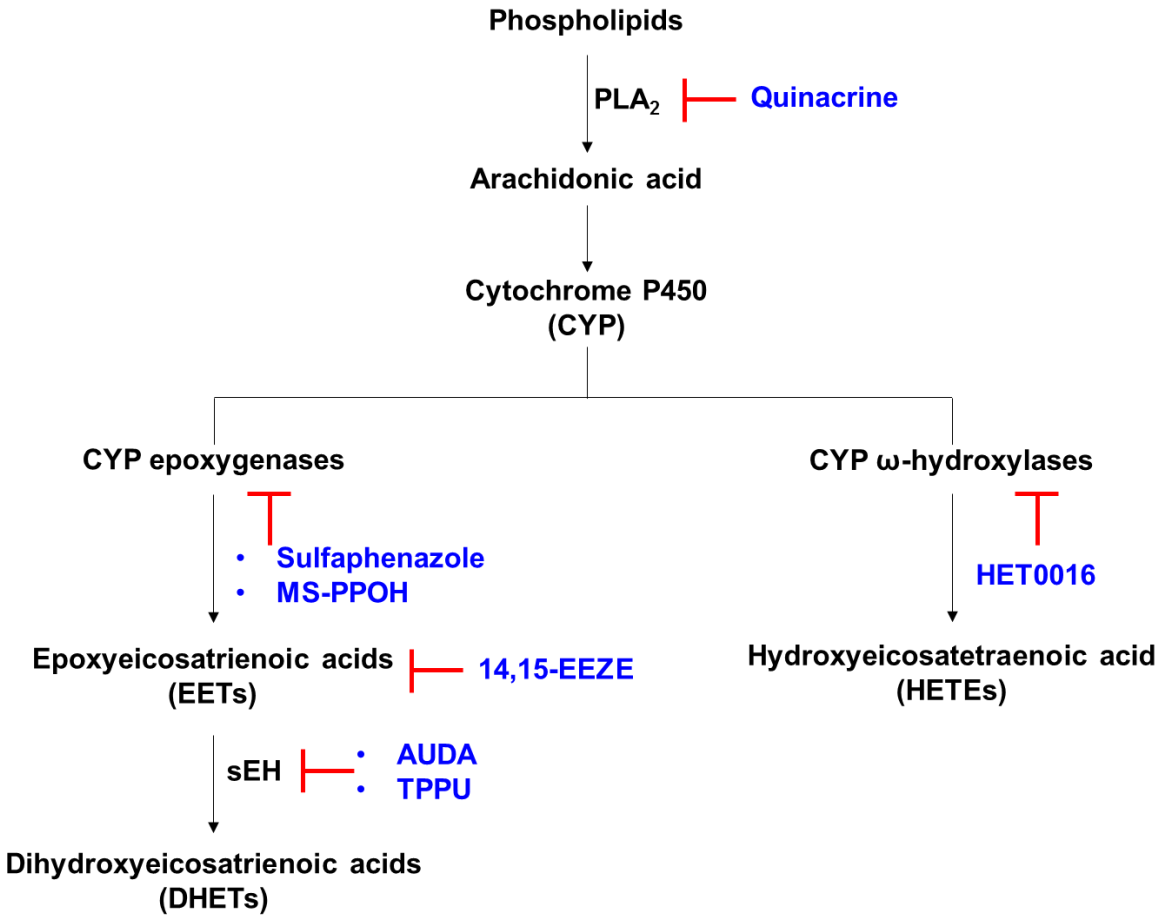


Supplementary Fig. S1. Original Western blot gels.
Full gel pictures showing the bands that correspond to the expression of (a) Cyp2c44 and (b) sEH corresponding β-actin loading control. Samples were pooled from n= 5 mice/ WT and n= 6 mice/ Cyp2c44-/- and sEH-/- for each lane, per Western blot analysis.



Supplementary Fig. S2. Chromatograms of 14,15-EET in the murine ophthalmic artery. Representative LC-MS/MS chromatogram of 14, 15-EET (in red) compared to deuterated internal standard (in blue). R1- R3: replicate 1-3; n = 5/ replicate. cps: count per second.



Supplementary Fig. S3. Overview of various pharmacological tools employed in this study to investigate the contribution of the arachidonic acid signalling mediators in the murine ophthalmic artery.

Phospholipase A2 (PLA2) releases arachidonic acid from the cell plasma membrane, which is then metabolized by CYP enzymes to produce four regioisomers of epoxyeicosatrienoic acids (EETs) via the CYP epoxygenase pathway or hydroxyeicosatetraenoic acid (HETEs) via the CYP ω-hydroxylase pathway. Epoxyeicosatrienoic acids are catalysed by soluble epoxide hydrolase (sEH) to corresponding vicinol diols, dihydroxyeicosatrienoic acids (DHETs). Two structurally distinct inhibitors of CYP and sEH comprising MS-PPOH and sulfaphenazole to inhibit the former, and AUDA and TPPU to inhibit the latter, were used to examine their effects on ACh-induced vasorelaxation.