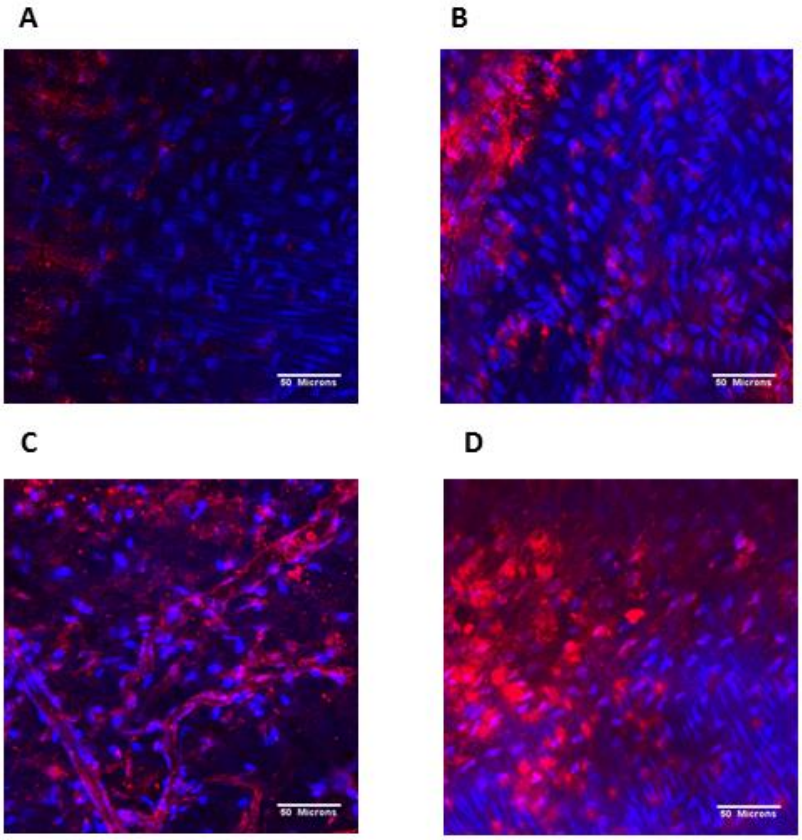
Supplementary Figure 1

H Alganga, T.A.M Almabrouk, O.J. Katwan, C.J. Daly, S Pyne, N J Pyne, & S Kennedy. Short periods of hypoxia upregulate Sphingosine Kinase 1 and increase vasodilation of arteries to Sphingosine 1-Phosphate *via* $S1P_3$ Journal of Pharmacology & Experimental Therapeutics.

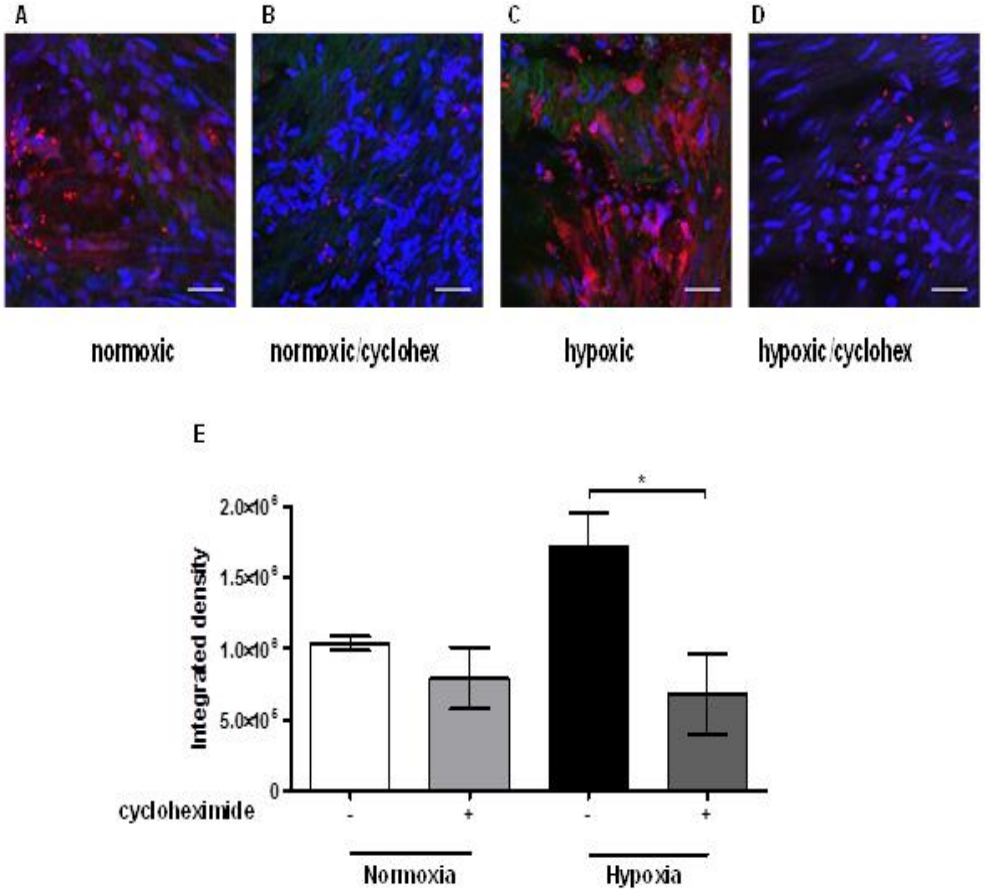


Supplementary Figure 1 Representative immunofluorescent images showing expression of $S1P_3$ receptors (panels A and B) and $S1P_1$ receptors (panels C and D) under normoxia (A and C) or hypoxia (B and D) in rat aortic endothelium. Receptor-associated fluorescence appears red and nuclei appear blue due to addition of Syto 82 nuclear stain. $S1P_3$ was expressed at a lower level under normoxic conditions compared to $S1P_1$ while hypoxia increased expression

of both receptors on the endothelium as determined by measuring integrated density (for all conditions at least four images were captured and analysed by a blinded observer).

Supplementary Figure 2

H Alganga, T.A.M Almabrouk, O.J. Katwan, C.J. Daly, S Pyne, N J Pyne, & S Kennedy. Short periods of hypoxia upregulate Sphingosine Kinase 1 and increase vasodilation of arteries to Sphingosine 1-Phosphate *via* $S1P_3$ Journal of Pharmacology & Experimental Therapeutics.



Supplementary Figure 2 Representative immunofluorescent images showing: (**A**) expression of SK1 (red) in rat coronary artery endothelium and (**B**) following pre-treatment with cycloheximide (10 µM, 30 min) under normoxic conditions. (**C**) Expression of SK1 in rat coronary artery subjected to 30 min hypoxia. (**D**) preincubation of rat coronary artery with

cycloheximide reduced the hypoxia-induced increase in SK1 expression. Nuclei appear blue due to addition of Syto 61 nuclear stain. (**E**) Quantitative fluorescence measurement of SK1 in the presence and absence of cycloheximide. *$p<0.05$ vs hypoxia alone as determined by one way ANOVA with Bonferroni multiple comparison post-tests. Results are representative of 3-5 separate experiments. Scale bar is 30 μm.