

Supplementary Figures

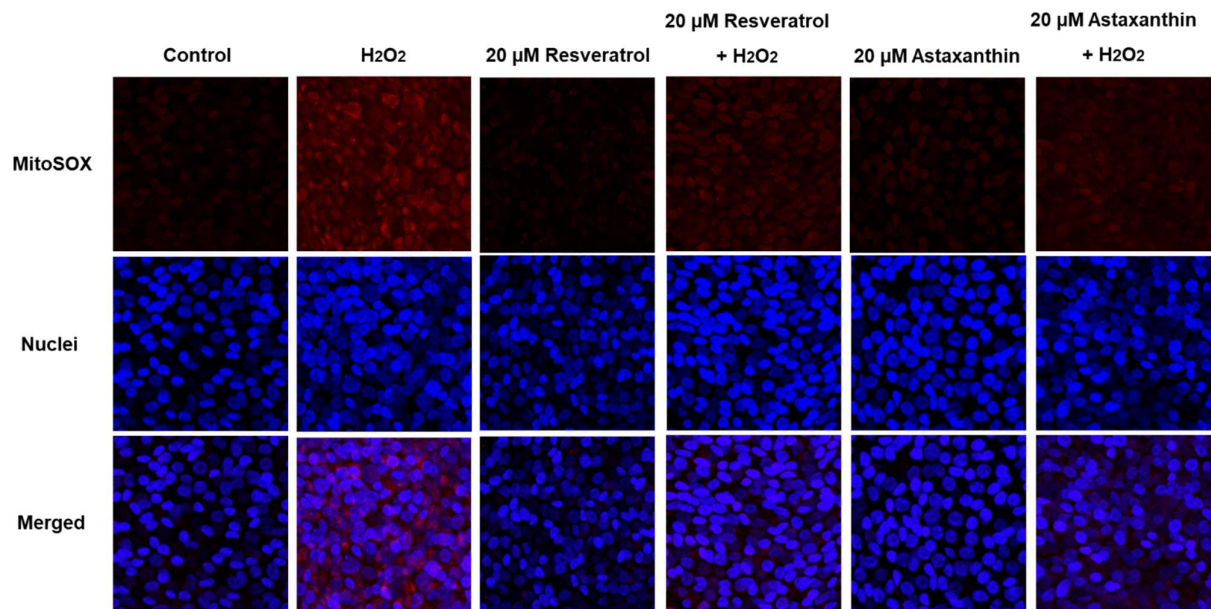


Figure S1. Inhibition of mtROS generation by resveratrol and astaxanthin. NECs were pretreated with antioxidants, resveratrol and astaxanthin, for 24 hours and were subsequently exposed to H₂O₂ for one hour. MitoSOX staining was performed, and images were taken by confocal microscopy (Red: mtROS; blue: nuclei.), mtROS can be seen in the cytoplasm (merged panel) with H₂O₂ exposure and this signal was reduced in antioxidant-treated cells.

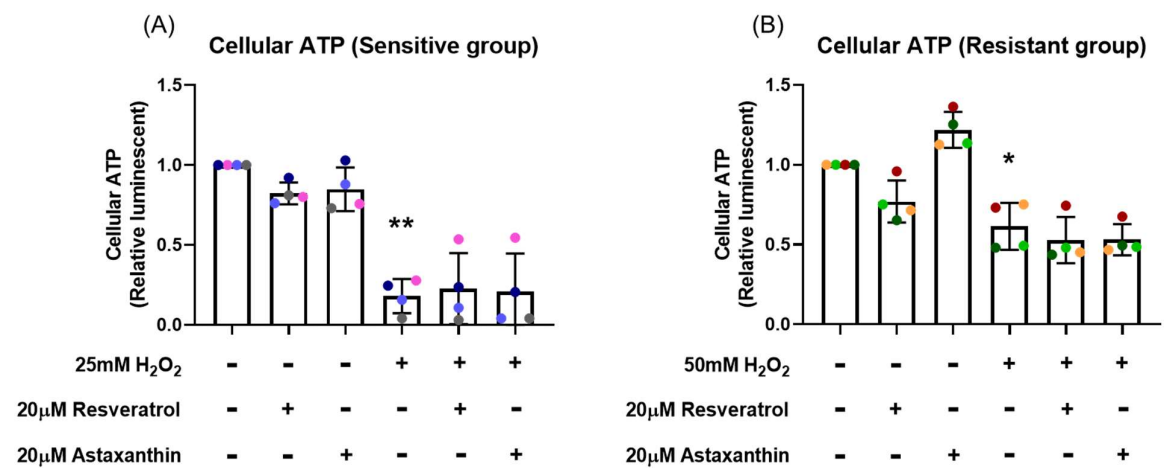


Figure S2. Resveratrol and astaxanthin could not recover H₂O₂-induced ATP reduction. A decrease in cellular ATP levels following one-hour H₂O₂ exposure was observed. ATP levels were not rescued following the addition of antioxidants in the sensitive

(A), and resistant (B) groups. Data presented as mean \pm SD (n=8; * $p<0.05$, ** $p<0.01$ compared with control). A single color was used in all figures to represent a single donor.

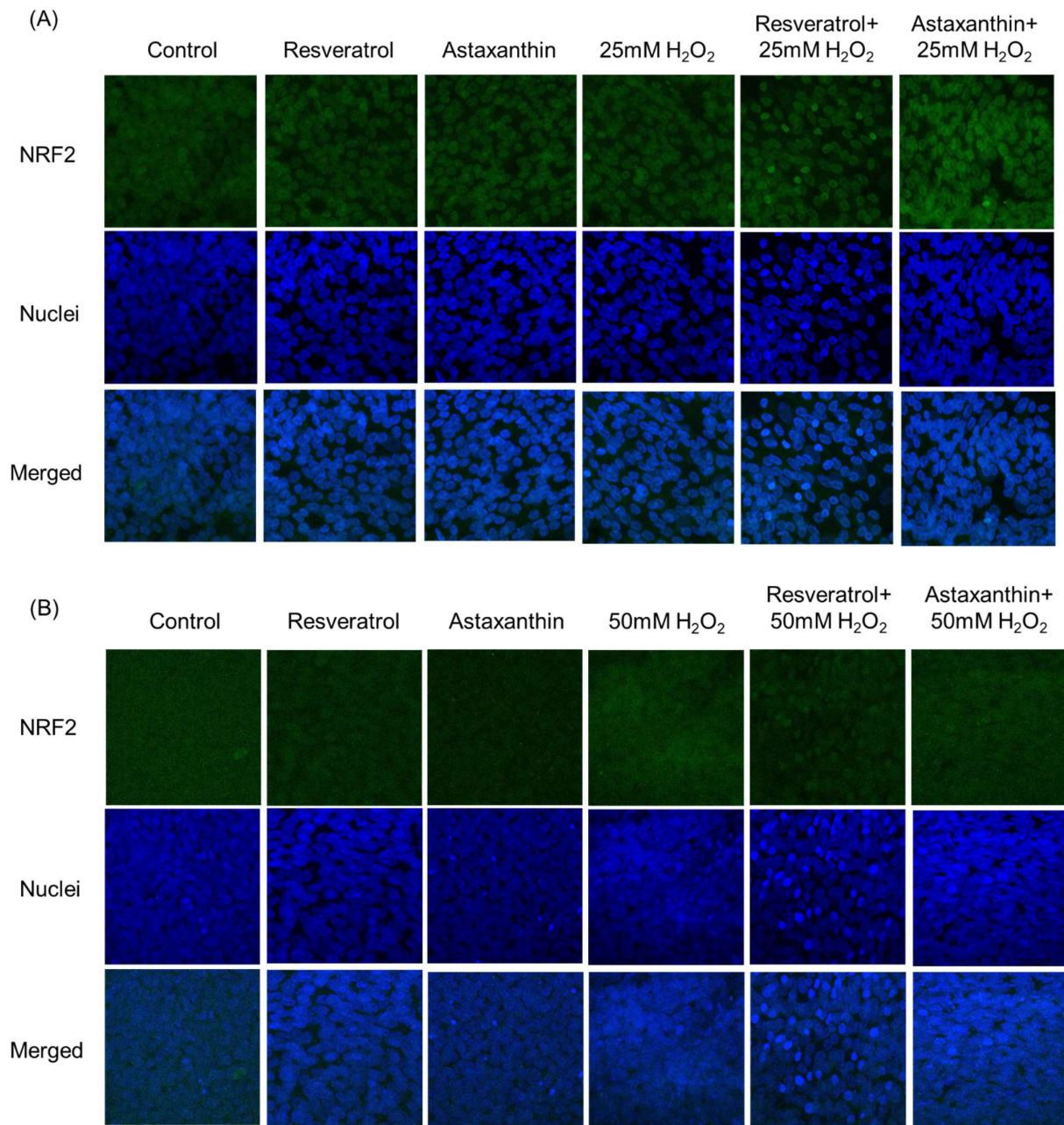


Figure S3. Resveratrol and astaxanthin did not affect H₂O₂-induced nuclear NRF2 translocation. Images of a representative sensitive individual (A) and of a representative resistant individual (B). Nuclear NRF2 increased by 4-hour post H₂O₂ exposure; this was not prevented or improved by resveratrol or astaxanthin pre-treatment.