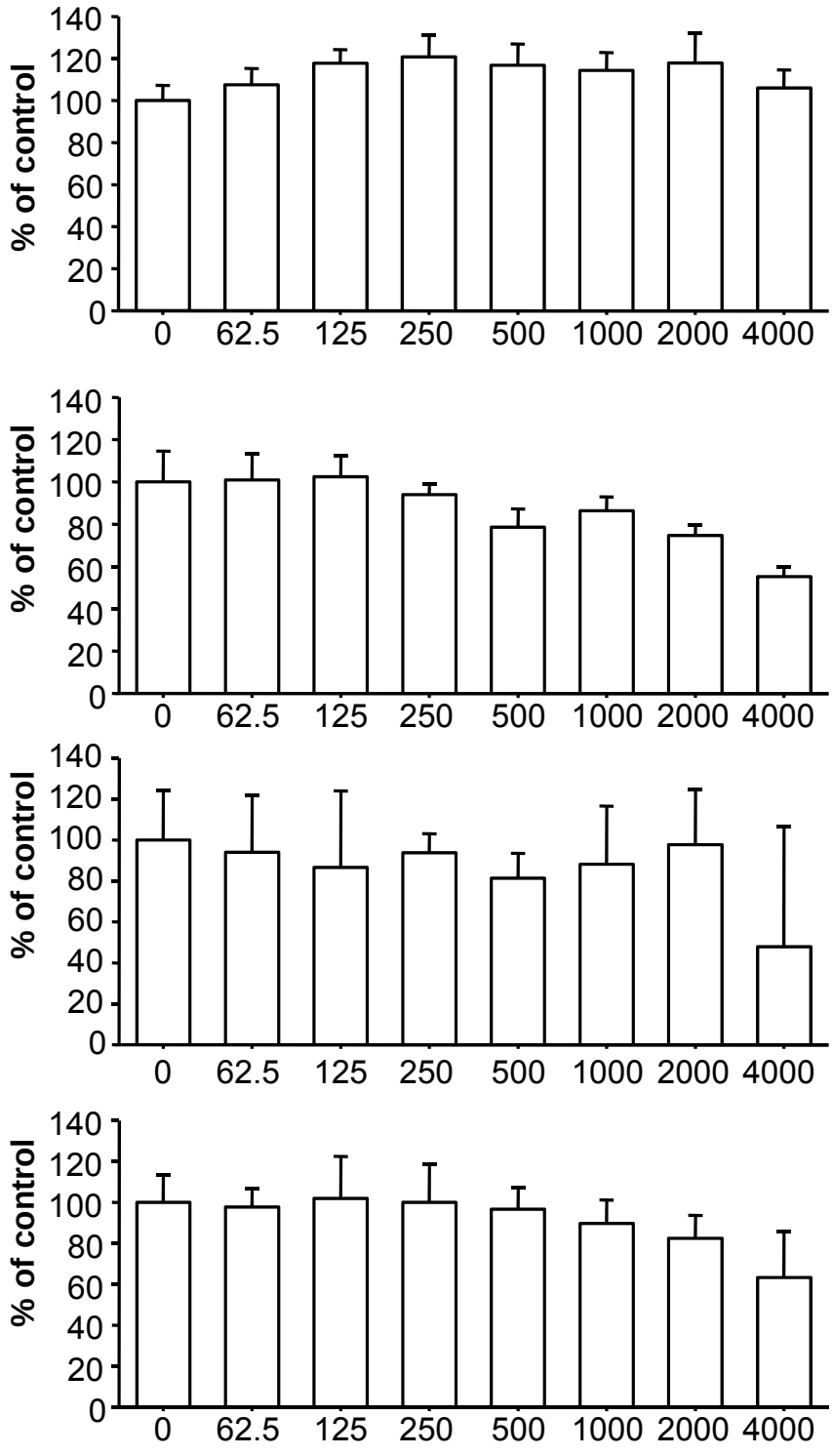
Supplement data

Figure S1. Effects of KYC on BAEC cytotoxicity. BAEC cultures were incubated with increasing concentrations of KYC for 24 h. (**A**) The cultures were examined for viability by the MTS assay (n=5). (**B**) The cultures were examined for changes in apoptosis by a caspase assay (n=3). (**C**) The cultures were examined for changes in necrosis using a protease assay (n=3). (**D**) The cultures were examined for changes in mitochondrial function using an ATP assay (n=3). All assays were performed as per the manufacturer's instructions.

Figure S2. KYC Inhibition of MPO-dependent HOCl formation in the presence of BAEC. BAEC (passage 6-8) were maintained in 24-well plates in DMEM containing 10% FBS until 70-80% confluent. The cells were treated with MPO, H_2O_2 and KYC in a total culture volume of 0.5 ml as described in Methods. HOCl generated by the MPO system was trapped with taurine (5 mM). After 30 min, taurine chloramine in the media was quantified using the TMB/KI assay. **(A)** KYC dose-dependently inhibited HOCl formation in the MPO-treated BAEC cultures. **(B)** KYC inhibited HOCl formation even when H_2O_2 and MPO were increased. **(C)** KYC dose-dependently inhibited HOCl generated by PMA-stimulated neutrophils incubated with BAEC cultures.

Figure S3. KYC protects BAEC from MPO-dependent injury. BAEC (passage 6-8) were cultured in a 96-well plate in DMEM containing 10% FBS until 70-80% confluent. The cultures were treated with MPO, H_2O_2 and KYC as described in Methods in a total incubation volume of 0.1 ml. After 30 min the cells were washed with HBSS 3 times. The cells were incubated with culture medium in a total volume of 0.1 ml and 20 µl MTS reagent at 37 °C for 2 h and A_{490nm} determined. Controls (without MPO) yielded an absorbance ~ 0.31. **A**. KYC dose-dependently increased MTS values, suggesting that KYC prevented MPO–dependent decreases in BAEC viability. **B**. KYC increased MTS values in BAEC cultures incubated with increases concentrations of H_2O_2 and MPO. **C**. KYC dose-dependently increased MTS values in BAEC

cultures incubated with PMA-stimulated neutrophils. Since activated neutrophils bind to empty culture plates and BAEC cultures, data in **C** represent A_{490nm} of neutrophils + BAEC cultures corrected for the A_{490nm} of PMA-stimulated neutrophils alone in empty wells.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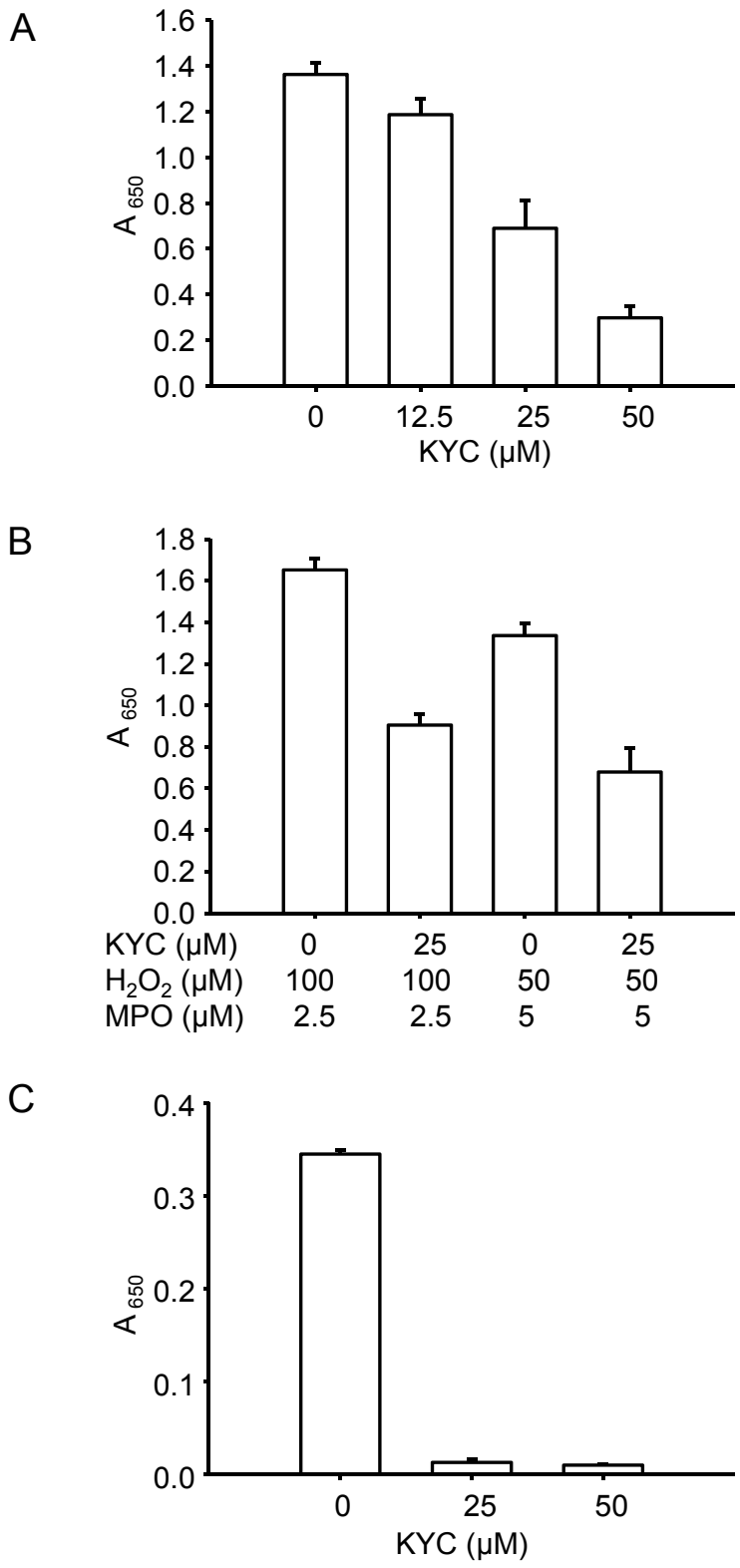
100
80
60
40
20
0
0
62.5
125
250
500
1000
2000
4000

Fig. 1S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1.2
1.0
0.8
0.6
0.4
0.2
0.0
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0
12.5
25
50
KYC (μM)
B
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
A 650
KYC (μM) 0 25 0 25
H2O2 (μM) 100 100 50 50
MPO (μM) 2.5 2.5 5 5
C
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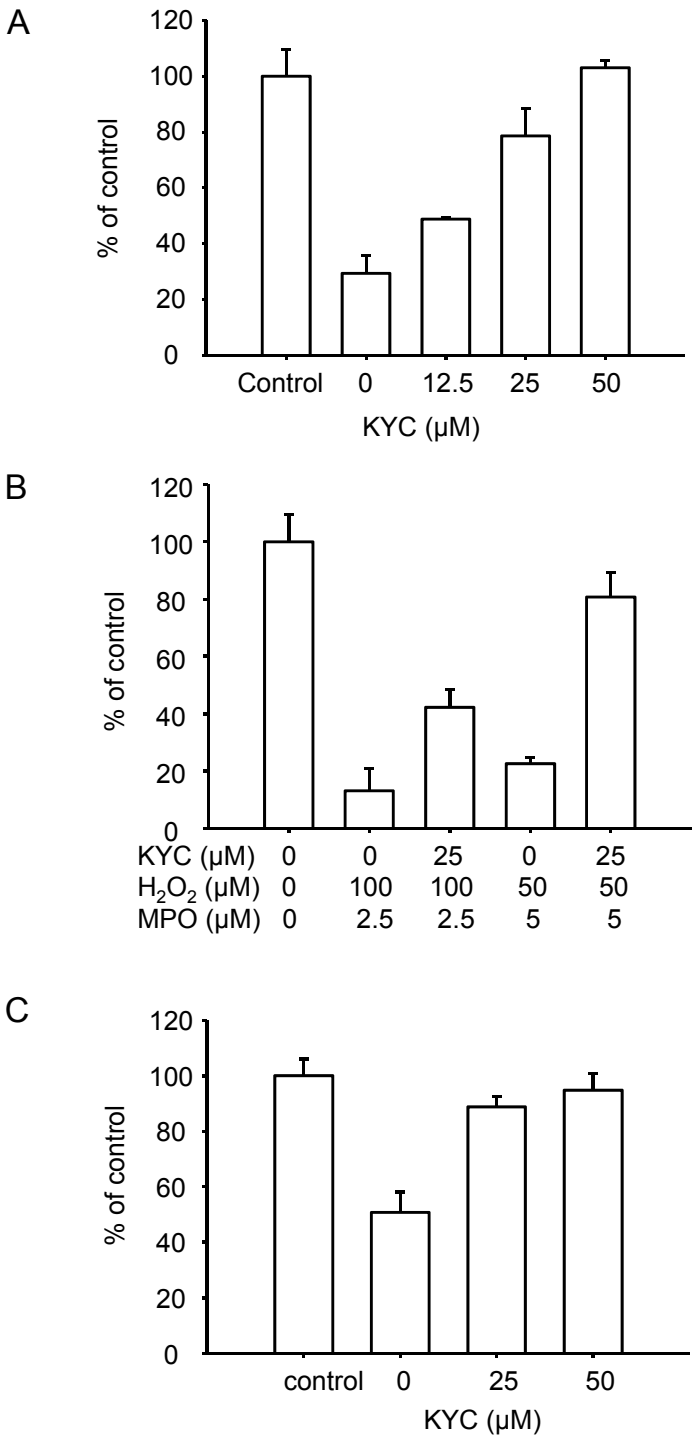
0.3
0.2
0.1
0.0
A 650
0
25
50
KYC (μM)

Fig.2S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80
60
40
20
0
% of control
Control
0
12.5
25
50
KYC (μM)
B
120
100
80
60
40
20
0
% of control
KYC (μM) 0 0 25 0 25
H2O2 (μM) 0 100 100 50 50
MPO (μM) 0 2.5 2.5 5 5
C
120
100
80
60
40
20
0
% of control
control
0
25
50
KYC (μM)

Fig. 3S