



Supplementary Materials

Table S1. Percentage \pm standard deviation of viable, dead and apoptotic cells after 1 h of treatment with different modification of active LPO system and inactive LPO system (without the addition of hydrogen peroxide). Asterisks indicate statistically significant difference between a tested group and control in post hoc Tukey's test - *p<0.05; **p<0.01; ***p<0.001.

| HGF Treatment | Viable Cells [%] | Dead Cells [%] | Apoptotic Cells [%] |
|---|---------------------|--------------------|---------------------|
| Control | 75.27 \pm 3.83 | 21.18 \pm 3.21 | 3.22 \pm 0.96 |
| H ₂ O ₂ | 69.67 \pm 2.67 | 19.37 \pm 1.52 | 3.67 \pm 0.32 |
| LPO | 70.17 \pm 4.76 | 18.73 \pm 3.85 | 9.43 \pm 0.56** |
| LPO + SCN ⁻ | 86.77 \pm 0.93* | 9.97 \pm 0.35*** | 1.87 \pm 0.42 |
| LPO + I ⁻ | 89.57 \pm 5.44* | 7.4 \pm 4.85** | 2.40 \pm 0.72 |
| LPO + SeCN ⁻ | 82.30 \pm 1.18* | 15.20 \pm 1.56* | 1.90 \pm 0.10 |
| LPO + SCN ⁻ + I ⁻ | 86.76 \pm 1.48* | 9.43 \pm 1.03*** | 2.00 \pm 1.21 |
| Active system | | | |
| LPO + SCN ⁻ + H ₂ O ₂ | 69.97 \pm 3.44 | 23.47 \pm 3.77 | 5.73 \pm 2.24** |
| LPO + I ⁻ + H ₂ O ₂ | 69.36 \pm 3.80 | 20.26 \pm 1.71 | 6.67 \pm 2.83** |
| LPO + SeCN ⁻ + H ₂ O ₂ | 58.43 \pm 5.39*** | 34.10 \pm 6.51** | 5.73 \pm 1.05** |
| LPO + SCN ⁻ + I ⁻ + H ₂ O ₂ | 78.53 \pm 3.27 | 16.10 \pm 2.95 | 4.17 \pm 1.32* |

Table S2. Percentage \pm standard deviation of cells in G0/G1, S, G2 phase and dead cells after 6h of treatment with different modification of active LPO system and inactive LPO system (without the addition of hydrogen peroxide). Asterisks indicate statistically significant difference between a tested group and control in post hoc Tukey's test - *p<0.05; **p<0.01; ***p<0.001.

| HGF Treatment | Cell Cycle Phase | | | Dead Cells [%] |
|---|-------------------|------------------|-------------------|--------------------|
| | G0/G1 [%] | S [%] | G2 [%] | |
| Control | 55.7 \pm 2.6 | 18.9 \pm 0.8 | 8.5 \pm 0.9 | 16.5 \pm 2.9 |
| H ₂ O ₂ | 16.7 \pm 6.0*** | 3.6 \pm 2.1*** | 1.2 \pm 0.7*** | 78.0 \pm 9.1*** |
| LPO | 56.7 \pm 0.8 | 16.0 \pm 0.8 | 8.6 \pm 0.9 | 18.5 \pm 0.8 |
| LPO + SCN ⁻ | 57.1 \pm 1.6 | 14.9 \pm 0.8 | 7.4 \pm 1.3 | 20.4 \pm 3.8 |
| LPO + I ⁻ | 57.4 \pm 2.3 | 16.0 \pm 0.9 | 8.4 \pm 0.1 | 18.0 \pm 3.0 |
| LPO + SeCN ⁻ | 59.1 \pm 0.4 | 20.2 \pm 0.6 | 5 \pm 0.3 | 15.4 \pm 1.3 |
| LPO + SCN ⁻ + I ⁻ | 55.6 \pm 4.2 | 19.6 \pm 1.2 | 8.9 \pm 0.6 | 15.4 \pm 4.8 |
| Active systems | | | | |
| LPO + SCN ⁻ + H ₂ O ₂ | 19.0 \pm 1.0*** | 7.7 \pm 0.8*** | 1.13 \pm 0.1*** | 71.2 \pm 0.5*** |
| LPO + I ⁻ + H ₂ O ₂ | 14.6 \pm 0.6*** | 3.8 \pm 0.1*** | 1.0 \pm 0.1*** | 70.7 \pm 16.1*** |
| LPO + SeCN ⁻ + H ₂ O ₂ | 43.6 \pm 0.6** | 14.2 \pm 0.1** | 0.8 \pm 0.2*** | 38.8 \pm 3.3* |
| LPO + SCN ⁻ + I ⁻ + H ₂ O ₂ | 12.9 \pm 7.3*** | 3.0 \pm 1.5*** | 0.9 \pm 0.5*** | 82.9 \pm 9.6* |

Table S3. Absolute fluorescence intensity \pm standard deviation of probes detecting cellular GSH and mitochondrial superoxide after 1 h treatment of different modifications of active LPO system and inactive LPO system. Asterisks indicate statistically significant differences between a tested group and control in Tukey's test – *p<0.05; **p<0.01; ***p<0.001.

| HGF Treatment | Mean GSH Fluorescence | Mean MitoSOX Fluorescence |
|-------------------------------|-----------------------|---------------------------|
| Control | 61478 \pm 4473 | 197.7 \pm 26.2 |
| H ₂ O ₂ | 66539 \pm 2573 | 281.7 \pm 35.1 |
| LPO | 64774 \pm 3829 | 284.3 \pm 7.6 |
| LPO + SCN ⁻ | 66570 \pm 3900 | 433.7 \pm 42.5*** |

| | | |
|---|--------------|-----------------|
| LPO + I ⁻ | 60797 ± 2407 | 521.3 ± 48.4*** |
| LPO + SeCN ⁻ | 63474 ± 2238 | 496.0 ± 30.4*** |
| LPO + SCN ⁻ + I ⁻ | 69376 ± 1897 | 518.0 ± 79.4*** |
| Active systems | | |
| LPO + SCN ⁻ + H ₂ O ₂ | 66734 ± 3807 | 435.6 ± 50.6*** |
| LPO + I ⁻ + H ₂ O ₂ | 66049 ± 2905 | 449.7 ± 73.0*** |
| LPO + SeCN ⁻ + H ₂ O ₂ | 64717 ± 1677 | 439.7 ± 42.5*** |
| LPO + SCN ⁻ + I ⁻ + H ₂ O ₂ | 68511 ± 2727 | 450.7 ± 37.2*** |