

Figure SM1. TEAC vs Log P. Data evidence the inverse linear correlation between antioxidant capacities and lipophilicity in hydroxytyrosyl esters **2a,c-f.**

Table SM1. Determination of intracellular ROS in L6 and THP1 cell lines after stimulation of DCF fluorescence with 40 (L6) or 200 μ M (THP-1) cumene hydroperoxide alone (CH) and in presence of dihydroxytyrosyl esters **2a,c-j** at 10 and 1 μ M concentrations. Data are reported as mean values ± SD of five experiments carried out in triplicate. Statistical analysis performed with one-way ANOVA and Bonferroni post-test.

	L6 cell culture		THP1 cell culture	
conc	1µM	10µM	1µM	10µM
compound	% ROS	% ROS	% ROS	% ROS
CHP	100 ±5	100 ±5	100 ±5	100 ±5
1	62 ±6	30 ±8	62 ±15	38 ±20
2a	58 ±17	34 ±17	56 ±13	35 ±12
2c	35 ±19	24 ±14	55 ±12	33 ±11
2d	41 ±20	20 ±12	50 ±18	25 ±10
2e	37 ±18	12 ±10	56 ±18	22 ±5
2f	2 ±6	2 ±4	28 ±4	21 ±8
2g	8 ±4	1 ±2	22 ±6	10 ±3
2h	6 ±8	2 ±7	15 ±10	5 ±6
2i	10 ±16	11 ±11	18 ±7	8 ±3
2j	34 ±15	7 ±9	15 ±4	3 ±4



Figure SM2. Effect of compound **2f** (10 μ M) on the proliferation of L6 (**a**) and THP-1(**b**) cells in presence or absence of cumene hydroperoxide (CH, 40 μ M in L6 and 200 μ M in THP-1 cells). Cell counting was done with a Neubauer chamber. Data are reported as mean values ± SD of each compound tested in duplicate. Statistical analysis performed with one-way ANOVA and Bonferroni post-test.



Figure SM3. Effect of compound **2h** (10 μ M) on the proliferation of L6 (**a**) and THP-1(**b**) cells in presence or absence of cumene hydroperoxide (CH, 40 μ M in L6 and 200 μ M in THP-1 cells). Cell counting was done with a Neubauer chamber. Data are reported as mean values ± SD of each compound tested in duplicate. Statistical analysis performed with one-way ANOVA and Bonferroni post-test.



Figure SM4. Effect of compound **2i** (10 μ M) on the proliferation of L6 (**a**) and THP-1(**b**) cells in presence or absence of cumene hydroperoxide (CH, 40 μ M in L6 and 200 μ M in THP-1 cells). Cell counting was done with a Neubauer chamber. Data are reported as mean values ± SD of each compound tested in duplicate. Statistical analysis performed with one-way ANOVA and Bonferroni post-test.



Figure SM5. Effect of compound **2j** (10 μ M) on the proliferation of L6 (**a**) and THP-1(**b**) cells in presence or absence of cumene hydroperoxide (CH, 40 μ M in L6 and 200 μ M in THP-1 cells). Cell counting was done with a Neubauer chamber. Data are reported as mean values ± SD of each compound tested in duplicate. Statistical analysis performed with one-way ANOVA and Bonferroni post-test.