Table 1. Selectivity of Oxidation of Mito-HE and HE.

Oxidant	Oxidant AUC	Mito-HE λ_{ex}=396nm	HE λ_{ex}=396nm	Mito-HE λ_{ex}=510nm	HE λ_{ex}=510nm
Superoxide ($O_2^{\bullet-}$)	3.52	100 ± 5.5%	100 ± 35%	100 ± 5.3%	100 ± 21%
Peroxynitrite ($ONOO^-$)	8.33	2.2 ± 0.3%	1.5 ± 0.5%	3.0 ± 0.9%	0.6 ± 0.2%
Nitrosoperoxy carbonate ($ONOOCO_2^-$)	8.33	2.1 ± 0.4%	1.6 ± 0.6%	1.6 ± 0.4%	1.2 ± 0.3%
Hydrogen peroxide (H_2O_2)	100	6.4 ± 0.5%	6.2 ± 2.2%	10 ± 3.8%	6.7 ± 1.4%
Hydroxyl Radical (•OH)	-	4.4 ± 0.2%	1.3 ± 0.5%	6.0 ± 1.2%	2.2 ± 3.2%
Hypochlorous bleach (HOCl)	100	4.8 ± 0.2%	3.3 ± 1.2%	8.4 ± 0.1%	4.3 ± 0.9%

Table 1. Selectivity of oxidation of Mito-HE is expressed relative to the fluorescence generated by $O_2^{\bullet-}$. Oxidant exposure (μM•min) represents the area under the curve (AUC) or integrated amount of oxidant exposure over time to account for differences in half life decay of oxidants. A significant concentration of DMSO (28 mM) from the Mito-HE stock, as well as urate, xanthine or xanthine oxidase were all present in the hydroxyl radical generating system and will therefore have competed with the reaction of Mito-HE for hydroxyl radical. The increase in fluorescence of 10 μM Mito-HE upon oxidant exposure was measured using λ_{ex}=396 and λ_{ex}= 510 nm with λ_{em} = 580 nm. Mito-HE appears to be selectively oxidized by superoxide. For example, a 28-fold greater exposure to hydrogen peroxide was required to obtain just 10% of the superoxide-induced fluorescent signal.