Table I: Quantitation of the Major ROS Proteins[a]

protein	identification no.	app M_r	% of stain		molar ratio		copies/ROS	
			Coomassie	silver	Coomassie	silver	Coomassie	silver
rhodopsin	3.8	35000–39000	69 ± 6.7	68 ± 2.6	1000	1000	3×10^9	3×10^9
G-protein							$\sim 3 \times 10^8$	$\sim 3 \times 10^8$[c]
α	E3.71	40000	9.0 ± 1.18	11 ± 1.6	130	166		
β	E3.72	35000	7.3 ± 0.82	NS[d]	100	–		
γ	C5.9	5000	0.59 ± 0.04	1.4 ± 0.69	30	70		
48k	E3.1	48000	2.6 ± 0.08	2.6 ± 0.48	30	30	8.4×10^7	8.4×10^7
PDE							1.5×10^7	2.2×10^7[c]
α	E2.1	95000	0.87 ± 0.14	1.4 ± 0.54	5	9		
β	E2.2	94000	0.78 ± 0.14	1.4 ± 0.54	5	9		
220K	D1.1	220000	2.6 ± 0.43	11 ± 1.7	6	28	1.8×10^7	8.4×10^7
	F5.6	14000	0.43 ± 0.02	0.47 ± 0.09	15	19	4.5×10^7	5.7×10^7
	D,E5.1[b]	29000	0.57 ± 0.14	0.23 ± 0.05	11	5	3.2×10^7	1.3×10^7
	D,F4.9[b]	31000	0.71 ± 0.07	0.74 ± 0.05	12	13	3.6×10^7	3.9×10^7
	E3.4	45000	0.37 ± 0.08	–	4	–	1.2×10^7	–
	C,D,E,F3.3[b]	46000	0.77 ± 0.06	0.10	8	12	2.4×10^7	3.6×10^7
	E2.9	55000	0.77 ± 0.06	0.10	7	3	2.4×10^7	7.5×10^6
	E2.7	68000	0.14	–	1	–	3×10^6	–
	E2.6	70000	1.1 ± 0.06	0.23 ± 0.05	9	2	2.7×10^7	5.7×10^6
	E2.5	80000	0.47 ± 0.04	–	4	–	1.3×10^7	–
	5.3	20000	0.06 ± 0.007	0.15	2	4	5×10^6	1.2×10^7
	4.3	32000	0.18 ± 0.04	0.26	3	5	9×10^6	1.4×10^7
	3.6	43000	0.69	0.03	8	0.3	2.4×10^7	9.3×10^5
	2.8	56000	0.15 ± 0.01	0.08	1	1	3×10^6	1.7×10^6

[a] From left to right, the columns indicate the name of the protein (if known), the identification number assigned to the protein, the apparent molecular weight, the relative staining intensity with Coomassie and silver stains, the molar ratios with respect to rhodopsin taken as 1000, and an estimate of the number of copies of each protein per ROS. Each ROS contains approximately 3×10^9 rhodopsin molecules (Liebman & Entine, 1968). Protein masses were determined by integration of densitometer scans of stained acrylamide gels as described under Materials and Methods. Each result is the average (±SD) of several measurements obtained at four protein concentrations within the linear range of dye staining. Dashes indicate undetectable levels of stain. The relative abundance of each protein was calculated with respect to rhodopsin, whose concentration was known. Variability stems from different affinities of the proteins for each stain. [b] Represents one band in one-dimensional gels, multiple spots in two-dimensional gels. [c] See Results. [d] NS, nonstaining.