Table 2. Properties of the most useful optical highlighter FP reporters

Protein (acronym)	Ex (nm)	Em (nm)	EC × 10^{-3} M^{-1} cm^{-1}	QY	Oligomeric structure	Relative brightness (% of EGFP)	Reference
Photoactivatable FPs							
PA-GFP (NA)[a]	400	515	20.7	0.13	Monomer	8	Patterson and Lippincott-Schwartz 2002
PA-GFP (G)[a]	504	517	17.4	0.79	Monomer	41	Patterson and Lippincott-Schwartz 2002
PS-CFP2 (C)[a]	400	468	43.0	0.20	Monomer	26	Chudakov et al. 2004
PS-CFP2 (G)	490	511	47.0	0.23	Monomer	32	Chudakov et al. 2004
PA-mRFP1 (R)[a]	578	605	10.0	0.08	Monomer	3	Verkhusha and Sorkin 2005
PA-mCherry1 (NA)[a]	404	NR[a]	6.5	NR	Monomer	NR	Subach et al. 2009
PA-mCherry1 (R)	564	595	18.0	0.46	Monomer	20	Subach et al. 2009
Photoconvertible FPs							
Kaede (G)	508	518	98.8	0.88	Tetramer	259	Ando et al. 2002
Kaede (R)	572	580	60.4	0.33	Tetramer	59	Ando et al. 2002
Kikume (KikGR; G)	507	517	53.7	0.70	Tetramer	112	Tsutsui et al. 2005
Kikume (KikGR; R)	583	593	35.1	0.65	Tetramer	68	Tsutsui et al. 2005
mKikGR (G)	505	515	49.0	0.69	Monomer	101	Habuchi et al. 2008
mKikGR (R)	580	591	28.0	0.63	Monomer	53	Habuchi et al. 2008
tdEos (G)	506	516	84.0	0.66	P-Monomer[a]	165	Nienhaus et al. 2006
tdEos (R)	569	581	33.0	0.60	P-Monomer[a]	59	Nienhaus et al. 2006
Dendra2 (G)	490	507	45.0	0.50	Monomer	67	Gurskaya et al. 2006
Dendra2 (R)	553	573	35.0	0.55	Monomer	57	Gurskaya et al. 2006
mEosFP2 (G)	506	519	56.0	0.84	Monomer	140	McKinney et al. 2009
mEosFP2 (R)	573	584	46.0	0.66	Monomer	90	McKinney et al. 2009
Photoswitchable FPs							
Kindling (R)	580	600	59.0	0.07	Tetramer	12	Chudakov et al. 2003
Dronpa (G)	503	518	95.0	0.85	Monomer	240	Ando et al. 2004

[a]Signifies a weak dimer.

The peak excitation (Ex) and emission (Em) wavelengths, molar extinction coefficient (EC), quantum yield (QY), relative brightness, and physiologically relevant quaternary structure are listed for both the activated and nonactivated species. The computed brightness values were derived from the product of the molar extinction coefficient and quantum yield, divided by the value for EGFP (NA) native or nonphotoactivated species; (G) green species; (C) cyan species; (R) red species; (NR) not reported; (P-Monomer[a]) pseudo monomer (tandem dimer).