Table 1. Spectral characterization of YFP variants[a]

Name	Substitutions	λabs (ε)	λem (Φ)	pKa	K_d for Cl^- (mM)	K_{fold} (10^{-2} s^{-1})	K_{ox} (10^{-3} s^{-1})	Relative fluorescence at 37°C
EYFP	–	515 (80.4)	528 (0.61)	6.9	110	0.39	2.53	1
EYFP-F46L	F46L	515 (78.7)	528 (0.61)	6.9	145	1.94	3.87	20
SEYFP	F64L/M153T/V163A/S175G	515 (101)	528 (0.56)	6.0	$>10^4$	6.60	2.36	3
SEYFP-F46L (Venus)	F46L/F64L/M153T/V163A/ S175G	515 (92.2)	528 (0.57)	6.0	$>10^4$	5.62	8.04	30

[a]The extinction coefficients (ε) (in the units of 10^3 $M^{-1}cm^{-1}$) and quantum yields (Φ) were determined as described[4]. For pH titration, all buffers contained 35 mM Cl^-, with adjustment of the ionic strength to 150 mM using potassium D-gluconate. Chloride titration was performed in 10 mM 4-morpholinepropanesulfonic acid (pH 7.0) containing specified [Cl^-] ranging from 0 to 400 mM, and the ionic strength was adjusted to 400 mM with potassium D-gluconate. Relative fluorescence intensities in *Escherichia coli* at 37°C were calculated by adjustment of the fluorescence measurement by OD at 600 nm.