

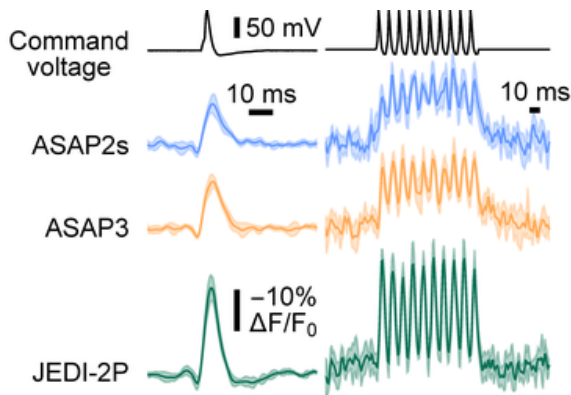
JEDI-2P spec sheet

All experiments performed at room temperature in HEK293A cells unless otherwise noted

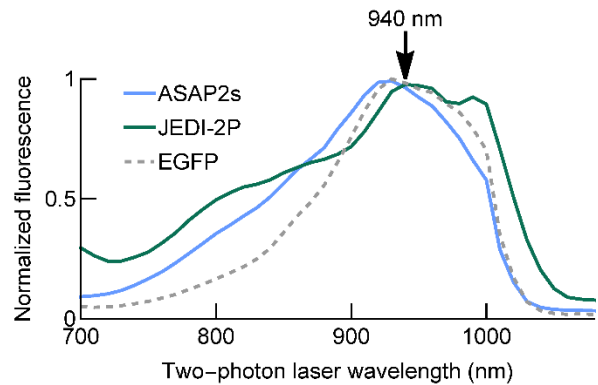
1-4 imaging rate \approx 440 fps, excitation wavelength = 920 nm

5 acquisition rate 80 kHz (down-sampled to 20kHz), excitation wavelength = 470 nm

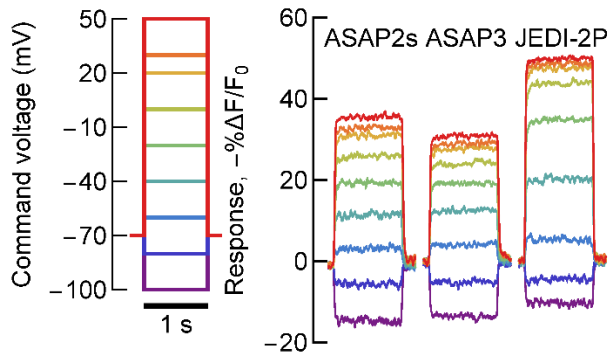
1. Response to action potentials



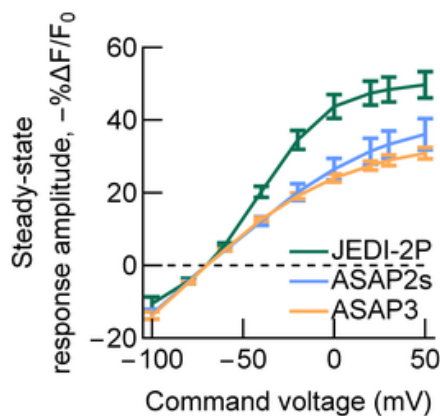
5. Excitation spectra



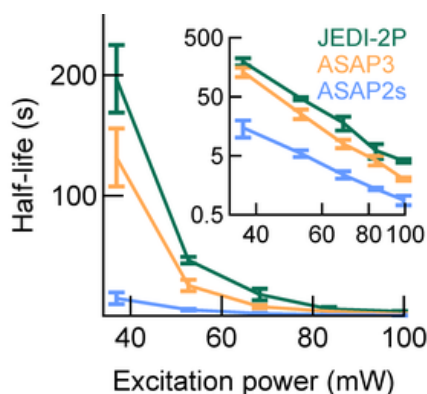
2. Response to step voltages



3. F-V curve



4. Photostability



6. Kinetics

	JEDI-2P	ASAP3	ASAP2s
Depolarization Kinetics at 32°–35°C			
Tau fast (ms)	0.54 ± 0.06	0.98 ± 0.15	3.78 ± 0.22
Tau slow (ms)	7.78 ± 1.46	20.9 ± 16.2	132 ± 63
Fast %	87.5 ± 2.2	82.4 ± 5.9	93.6 ± 1.2
Repolarization Kinetics at 32°–35°C			
Tau fast (ms)	1.21 ± 0.10	4.29 ± 0.68	7.59 ± 0.60
Tau slow (ms)	-	136 ± 47	170 ± 25
Fast %	-	86.9 ± 11.2	91.7 ± 0.6
Depolarization Kinetics at 21°–23°C			
Tau fast (ms)	1.21 ± 0.11	2.26 ± 0.55	6.39 ± 0.34
Tau slow (ms)	12.0 ± 3.3	32.2 ± 18.8	125 ± 43
Fast %	88.3 ± 4.4	78.4 ± 11.0	91.3 ± 1.3
Repolarization Kinetics at 21°–23°C			
Tau fast (ms)	2.54 ± 0.30	11.0 ± 1.2	12.7 ± 0.9
Tau slow (ms)	-	112 ± 44	143 ± 22
Fast %	-	85.3 ± 10.9	87.1 ± 2.2