Figure S4

A

ChR2-H134R
VChR1
C1V 2-5
C1V1-E122T/E162T

ChEF (C1C2 5-2)
V1C2 2-2-3
C1V1-E122T/V196I/G197A

Protein | Peak activity (nm)
-------|---------------------
ChR2-H134R | 461±1
VChR1 | 488±6/546±1
C1V1-2-5 | 539±4
C1V1-ET/ET | 528±2
ChEF (C1C2-5-2) | 442±2; 504±3
V1C2-2-2-3 | 458±13; 564±2
C1V1-ET/V1/GA | 544±1

B

ChR2-HR (n=10)

Average length before light
Average length during light

Body length change (%)

Wavelength (nm)

400 nm
436 nm
480 nm
520 nm
580 nm

-16
-12
-8
-4
0
4
8
12
16

-3 -2 -1 0 1 2 3 4 5

400 450 500 550 600