

Table S2. Concentrations and timing of assembly of actin patch components.

Common name	Gene name	Normal function	Data ^a	N patches (k mov.) ^b or N/m cells ^b	Total molecules per cell, $\times 10^3$	Fraction in cytoplasm ^c / μ M in cytoplasm ^d	Peak Number of molecules per patch ^e	Appears at (s) ^f	Peaks at (s) ^f	Vanishes at (s) ^f	Lifetime (s)	Total distance (μ m) ^f
Clathrin Heavy Chain	Chc1p-mYFP Chc1p-mGFP Chc1p-mYFP	yes	2D N.D. 3D	10 (5) 34	52 \pm 5	0.26 / 0.8	40 \pm 10	-100 \pm 27	-	\leq +10	110 \pm 29	0.3 \pm 0.1
Clathrin Light Chain	Clc1p-mYFP Clc1p-mGFP Clc1p-mYFP	yes	2D 4D 3D	8 (4) 6 (2) 36	36 \pm 5	0.29 / 0.7	40 \pm 10 30 \pm 10	-105 \pm 10 -70	-	\leq +10 \leq +10	115 \pm 10 73 \pm 16	0.1 \pm 0.1 0.2 \pm 0.1
Sla2 (-Hip1R)	End4p-mYFP End4p-mGFP End4p-mYFP	yes	2D 4D 3D	13 6 164/2	22 \pm 2	0.72 / 1.0	80 \pm 20 160 \pm 20	-32 \pm 9 -32 \pm 7	+1 \pm 2 -2 \pm 4	+11 \pm 3 +9 \pm 3	43 \pm 8 41 \pm 8	0.8 \pm 0.2 0.7 \pm 0.3
Pan1 (-Eps15)	Pan1p-mYFP Pan1p-mGFP Pan1p-mYFP	yes	2D 4D 3D	15 10 108/2	27 \pm 2	0.59 / 1.0	220 \pm 50 260 \pm 60	-33 \pm 8 -32 \pm 8	+1 \pm 4 0 \pm 3	+12 \pm 3 +9 \pm 4	45 \pm 9 41 \pm 8	0.9 \pm 0.2 0.6 \pm 0.3
WASp	mYFP-Wsp1p mGFP-Wsp1p mYFP-Wsp1p	partial	2D 4D 3D	12 (10) 8 72/3	68 \pm 3	0.94 / 4.0	200 \pm 60 230 \pm 70	-11 \pm 2 -10 \pm 2	-2 \pm 1 -2 \pm 1	+3 \pm 2 +2 \pm 1	14 \pm 3 12 \pm 2	0.3 \pm 0.1 0.2 \pm 0.1
Verprolin	Vrp1p-YFP Vrp1p-GFP Vrp1p-YFP	yes	2D 4D 3D	10 (6) 7(3) 72/3	19 \pm 3	0.87 / 1.0	140 \pm 30 140 \pm 10	-10 \pm 4 -9 \pm 5	-2 \pm 3 -3 \pm 3	+5 \pm 2 +2 \pm 2	15 \pm 4 11 \pm 2	0.3 \pm 0.1 0.2 \pm 0.1
Myosin-1	mYFP-Myo1p mGFP-Myo1p mYFP-Myo1p	yes	2D 4D 3D	10 10 78/2	63 \pm 6	0.84 / 3.3	380 \pm 70 400 \pm 90	-10 \pm 2 ^f -9 \pm 2 ^f	(-2) ^f (-2) ^f	+7 \pm 2 ^f +5 \pm 2 ^f	17 \pm 3 14 \pm 2	0 ^f 0 ^f
Arp2/3 complex	Arp2p-mYFP Arp2-mGFP Arp2-mYFP	partial	2D 4D 3D	8 (3) 8 (4) 83/3	(46.6) ^e	0.78 / 2.3	380 \pm 100 320 \pm 100	-19 \pm 9 -13 \pm 2	-1 \pm 8 0 \pm 2	+10 \pm 2 +13 \pm 3	29 \pm 8 26 \pm 2	0.8 \pm 0.1 1.3 \pm 0.2
Arp2/3 complex	Arp3p-mYFP Arp3-mGFP Arp3-mYFP	partial	2D 4D 3D	10 (6) 8 (5) 72/3	(66.7) ^e	0.86 / 3.6	330 \pm 100 320 \pm 50	-14 \pm 9 -15 \pm 2	+4 \pm 7 -1 \pm 3	+13 \pm 5 +11 \pm 1	27 \pm 4 26 \pm 2	0.7 \pm 0.2 0.8 \pm 0.2
Arp2/3 complex	ARPC5-mYFP ARPC5-mGFP ARPC5-mYFP	partial	2D 4D 3D	10 (6) 11 (6) 97/3	(30.5) ^e	0.67 / 1.3	330 \pm 70 320 \pm 60	-14 \pm 4 -15 \pm 2	-1 \pm 3 -3 \pm 2	+12 \pm 5 +11 \pm 2	26 \pm 3 26 \pm 3	0.8 \pm 0.2 1.2 \pm 0.3
Fimbrin	Fim1p-mYFP Fim1p-mGFP Fim1p-mYFP	yes	2D 4D 3D	11 6 85/2	(86.5) ^e	0.68 / 3.7	920 \pm 220 910 \pm 170	-7 \pm 2 -7 \pm 1	+3 \pm 3 -1 \pm 1	+15 \pm 4 +15 \pm 3	22 \pm 3 22 \pm 2	0.8 \pm 0.3 1.0 \pm 0.2
Capping protein	Acp2p-YFP Acp2p-GFP Acp2p-YFP	yes	2D 4D 3D	12 8 85/3	(19.2) ^e	0.66 / 0.8	200 \pm 80 230 \pm 60	-7 \pm 2 -9 \pm 2	+4 \pm 3 0 \pm 3	+15 \pm 4 +11 \pm 2	22 \pm 5 20 \pm 3	0.8 \pm 0.3 0.7 \pm 0.3
App1p	App1p-mYFP App1p-mGFP App1p-mYFP	yes	2D 4D 3D	10 6 102/3	25 \pm 3	0.76 / 1.2	200 \pm 60 150 \pm 50	-7 \pm 1 -7 \pm 1	+2 \pm 3 0 \pm 2	+9 \pm 4 +8 \pm 2	16 \pm 4 15 \pm 2	0.7 \pm 0.2 0.7 \pm 0.2
Coronin	Cml1p-mYFP Cml1p-mGFP Cml1p-mYFP	yes	2D 4D 3D	11 10 95/3	68 \pm 11	0.73 / 3.1	500 \pm 140 490 \pm 180	-7 \pm 2 -6 \pm 2	+5 \pm 2 +5 \pm 3	+16 \pm 4 +15 \pm 3	23 \pm 4 21 \pm 3	1.1 \pm 0.4 1.3 \pm 0.5
Twinfilin	Twf1p-GFP	yes	4D	15	34 \pm 3	0.65 / 1.4	210 \pm 40	7 \pm 2	+1 \pm 2	10 \pm 4	17 \pm 4	0.8 \pm 0.3
Actin, 6%	mGFP-actin ^b	partial	4D	15	46 \pm 7	0.65 / 1.3	450 \pm 90	9 \pm 2	+1 \pm 2	10 \pm 2	19 \pm 2	0.7 \pm 0.2

Where applicable, numbers are shown as \pm SD.

^a Data types: (2D) time series of YFP images in a single confocal section, (4D) time series of Z-stacks of GFP images spanning the entire cell, (3D) Z-series of YFP images spanning the entire cell at a single time point.

^b N total patches (k moving patches) for 2D and 4D data, N total patches in m cells for 3D data.

^c Fraction of protein in the cytoplasm was calculated from the ratio (R_p) of the sum of cytoplasm-corrected intensities of all patches in the cell to total cell fluorescence as $(1-R_p)$ or from the ratio of average mean cytoplasmic fluorescence to mean whole cell fluorescence (see Table S3).

^d Protein concentration in the cytoplasm calculated by dividing total number of molecules by 16067 (22715 for actin) and multiplying by fraction in the cytoplasm.

^e Peak numbers of molecules from the 2D and 4D time courses were averaged for both moving and non-moving patches. Note that these values are slightly higher than peak values obtained by averaging time courses (Figures 1, 2 and 4-7) due to variation in peak timing.

^f Time of appearance, peak, disappearance, and total distance moved were measured for moving patches only. For Myo1p, these values were calculated after aligning Myo1p peak to Wsp1p peak.

^g Values from Wu and Pollard (2005).

^h Expressed at the level representing 6% of total actin.