Table 1. Reactions and parameters used in the model

Reaction number	Reaction	Reaction rate	Forward rate constant ($\mu M^{-1}\ s^{-1}$)[a]	Reverse rate constant (s^{-1})	References
3	ActiveWASp + G ⇆ WASpGDimer	$k^{+}_{WASpGBinding}$[ActiveWASp][G]-$k^{-}_{WASpGBinding}$[WASpGDimer]	42.9	25.7	Beltzner *et al.* (2008) and this study
4	WASpGDimer + Arp ⇆ ArpTernaryComplex	$k^{+}_{ArpComplexFormation}$[WASpGDimer][Arp]-$k^{-}_{ArpComplexFormation}$[ArpTernaryComplex]	0.8	0.74	
5	ArpTernaryComplex + FADP ⇆ FilamentBoundTernaryComplex	$k^{+}_{ARPGWBindingF}$[ArpTernaryComplex][FADP]-$k^{-}_{ARPGWBindingF}$[FilamentBoundTernaryComplex]	**0.3** (1.5 × 10^{-4})	1 × 10^{-3}	
5	ArpTernaryComplex + FATP ⇆ FilamentBoundTernaryComplex	$k^{+}_{ARPGWBindingF}$[ArpTernaryComplex][FATP]-$k^{-}_{ARPGWBindingF}$[FilamentBoundTernaryComplex]			
6	FilamentBoundTernaryComplex → ActiveArp	$k^{+}_{ArpActivation}$[FilamentBoundTernaryComplex]	0.5 [s^{-1}]	—	
7	ActiveArp + G → BEa + ArpInFilament	$k^{+}_{Polymerisation}$[G][ActiveArp]	11.6	—	Fujiwara *et al.* (2007)
7	G → FATP	$k^{+}_{Polymerisation}$[G][BEa]	11.6	—	Fujiwara *et al.* (2007)
8	BEa + C ⇆ BEc	k^{+}_{Cap}[BEa][C]-k^{-}_{Cap}[BEc]	**7** (0.11)	4 × 10^{-3}	Kuhn and Pollard (2007)
9	FATP → FADP	$k_{Hydrolysis}$[FATP]	**0.3** [s^{-1}]	—	This study
10	COF + FADP ⇆ FCOF	$k^{+}_{COFBinding}$[COF][FADP]-$k^{-}_{COFBinding}$[FCOF]	8.5 × 10^{-3}	5 × 10^{-3}	Blanchoin *et al.* (1999)
11 and 12	FATP → Ø	k_{Chop}[FCOF][FATP]	**3 × 10^{-3}** [b]	—	This study
	PE → Ø	k_{Chop}[FCOF][PE]			
	ArpInFilament → Ø	k_{Chop} [FCOF][ArpInFilament]			
	BEa → Ø	k_{Chop}[FCOF][BEa]			
	BEc → Ø	k_{Chop}[FCOF][BEc]			
	FCOF → Ø	k_{Chop}[FCOF][FCOF]			
	FADP → Ø	k_{Chop}[FCOF][FADP]			
13	FATP → Ø	$k^{-}_{Depolymerisation}$[PE][FATP]/Ftot	—	0.25	Fujiwara *et al.* (2007)
	FADP → Ø	$k^{-}_{Depolymerisation}$[PE][FADP]/Ftot			
	FCOF → Ø	$k^{-}_{Depolymerisation}$[PE][FCOF]/Ftot			
	PE + BEc → Ø	$k^{-}_{Depolymerisation}$[PE][BEc]/Ftot			

[a] Boldface values were obtained in this study. Values in parentheses are from the literature. Brackets note units different from $\mu M^{-1}\ s^{-1}$.
[b] For a concentration of active cofilin of 1 μM, k_{Chop} = 4 × 10^{-2} $\mu M^{-1}\ s^{-1}$ (this study).

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