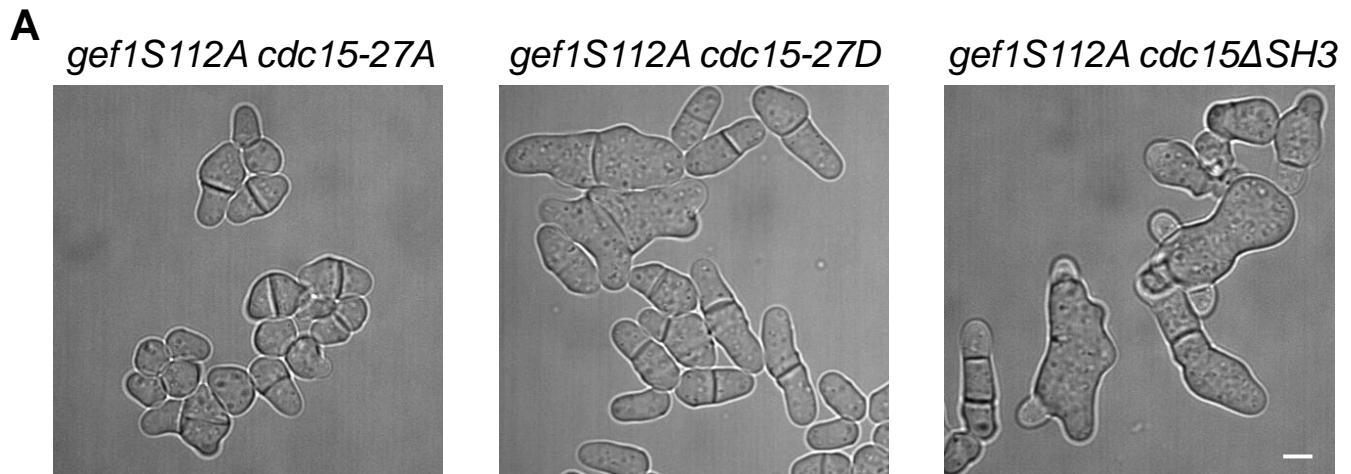


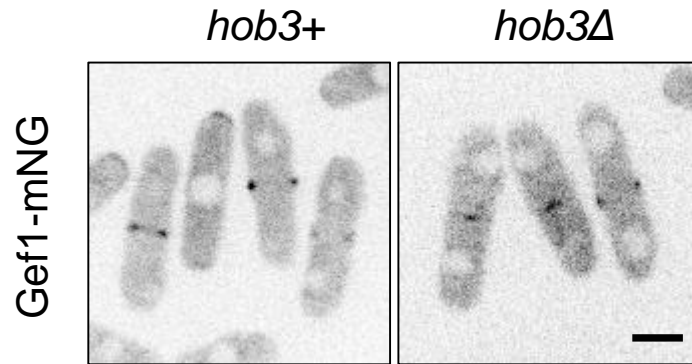
Supplemental Figure 1. *gef1* mutants polarity phenotypes are epistatic to *cdc15*. Representative images of the indicated genotypes stained with calcofluor to visualize polarized growth. Blue asterisks mark monopolar cells. Scale bar represents 5 μ m.



B

	polarity phenotypes		cell size
	aberrant	depolarized	>20μm
<i>gef1S112A cdc15-27A</i> n=215	64%	16%	0%
<i>gef1S112A cdc15-27D</i> n=220	69%	4%	18%
<i>gef1S112A cdc15ΔSH3</i> n=201	72%	6%	22%

Supplemental Figure 2. *gef1*-mediated polarity phenotypes regulated by both *cdc15*-dependent and *cdc15*-independent pathways. (A) Representative bright field images illustrating the polarity defects of the indicated genotypes. **(B)** Table providing qualitative and quantitative descriptions of the polarity defects present in the indicated genotypes. Scale bar represents 5μm.



Supplemental Figure 3. Gef1 localization is not impaired by loss of *hob3*. Inverted medial plane images showing Gef1-mNG localization in the indicated genotypes. Scale bar represents 5 μ m.

Table S1. Strains list.		
Strain	Genotype	Source
PN567	<i>h+ ade6-704 leu1-32 ura4-D18</i>	Paul Nurse
YMD926	<i>Gef1-mNeonGreen:kanMX Rlc1-tdTomato NATr Sad1-mCherry:kanMX ade6 leu1-32 ura4-D18</i>	This study
FC2126	<i>pREP42:cdc12ΔC-GFP:ura4+ ade6-M216 leu1-32 ura4-D18 his7+</i>	(YONETANI AND CHANG 2010)
YMD1054	<i>pREP42:cdc12ΔC-GFP:ura4+ Gef1-tdTomato:kanMX ade6 leu1-32 ura4-D18</i>	This study
KGY1105	<i>sid2-250 ade6-M21X ura4-D18 leu1-32</i>	(BALASUBRAMANIAN <i>et al.</i> 1998)
KGY2669	<i>plo1-25</i>	(BAHLER <i>et al.</i> 1998)
YMD872	<i>Δmid1::ura4+ Gef1-3xYFP:kanMX ade6 leu1-32 ura4-D18</i>	This study
YMD844	<i>plo1-1 Gef1-3xYFP:kanMX ade6 leu1-32 ura4-D18</i>	This study
YMD847	<i>sid2-250 Gef1-3xYFP:kanMX ade6-M21X ura4-D18 leu1-32</i>	This study
YMD952	<i>plo1-25 Gef1-mNeonGreen:kanMX Rlc1-tdTomato NATr Sad1-mCherry:kanMX ade6 leu1-32 ura4-D18</i>	This study
YMD954	<i>sid2-250 Gef1-mNeonGreen:kanMX Rlc1-tdTomato NATr Sad1-mCherry:kanMX ade6 leu1-32 ura4-D18</i>	This study
YMD978	<i>mid1Δ Gef1-mNeonGreen:kanMX Rlc1-tdTomato NATr Sad1-mCherry:kanMX ade6-M21X ura4-D18 leu1-32</i>	This study
YMD317	<i>CRIB-3xGFP:ura4+ Rlc1-tdTomato:NATr Sad1-mCherry:kanMX ade6-M21X leu1-32 ura4-D18 his7+</i>	(WEI <i>et al.</i> 2016)
YMD488	<i>Δgef1::ura4+ CRIB-3xGFP:ura4+ Rlc1-tdTomato:NATr Sad1-mCherry:kanMX ade6 leu1-32 ura4-D18 his7+</i>	(WEI <i>et al.</i> 2016)
YMD133	<i>Cdc15-GFP:kanMX6 sad1-mCherry:kanMX ade6-M21X leu1-32 ura4-D18</i>	(WEI <i>et al.</i> 2016)
YMD973	<i>cdc15ΔSH3-GFP:kanMX Gef1-tdTomato:kanMX Sad1-mCherry:kanMX ade6-M21X ura4-D18 leu1-32</i>	This study
YMD991	<i>Cdc15-GFP:kanMX Gef1-tdTomato:kanMX Sad1-mCherry:kanMX ade6-M21X ura4-D18 leu1-32</i>	This study
YMD929	<i>gef1S112A:ura4+ kanMX ade6-M210 ura4-D18 leu1-32</i>	This study
YMD710	<i>Δgef1::ura4+ ura4-D18 leu1-32</i>	This study

KGY7051	<i>cdc15ΔSH3 ade6-M210 leu1-34 ura4-D18</i>	(ROBERTS-GALBRAITH <i>et al.</i> 2009)
KGY10303	<i>cdc15-27A ade6-M21X leu1-32 ura4-D18</i>	(ROBERTS-GALBRAITH <i>et al.</i> 2010)
KGY9723	<i>cdc15-27D ade6-M21X leu1-32 ura4-D18</i>	(ROBERTS-GALBRAITH <i>et al.</i> 2010)
KGY10307	<i>cdc15-27A-GFP:kanMX ade6-M21X leu1-32 ura4-D18</i>	(ROBERTS-GALBRAITH <i>et al.</i> 2010)
YMD1155	<i>Cdc15-GFP:kanMX Gef1-tdTomato:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1145	<i>cdc15-27A-GFP:kanMX Gef1-tdTomato:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1243	<i>Cdc15-GFP:kanMX Scd1-tdTomato:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1212	<i>cdc15-27A-GFP:kanMX Scd1-tdTomato:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD121	<i>CRIB-3xGFP:ura4+ Sad1-mCherry:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1143	<i>cdc15-27A CRIB-3xGFP:ura4+ Sad1-mCherry:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1242	<i>Δgef1::ura4+ cdc15-27A CRIB-3xGFP:ura4+ Sad1-mCherry:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1097	<i>Δhob3::kanMX Gef1-mNeonGreen:kanMX ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1243	<i>Scd1-tdTomato:kanMX Cdc15-GFP:kanMX ade6 leu1-32 ura4-D18</i>	This study
YMD1212	<i>Scd1-tdTomato:kanMX Cdc15-27A-GFP ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1479	<i>Δgef1::ura4+ cdc15-27D ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1480	<i>Δgef1::ura4+ cdc15ΔSH3 ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1482	<i>gef1S112A:ura4+ kanMX cdc15-27A ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1483	<i>gef1S112A:ura4+ kanMX cdc15-27D ade6-M21X leu1-32 ura4-D18</i>	This study

YMD1484	<i>gef1S112A:ura4+ kanMX cdc15ΔSH3 ade6-M21X leu1-32 ura4-D18</i>	This study
YMD1485	<i>scd1Δ::ura4+ ral1:scd1+:leu1+ cdc15-27A ade6 leu1-32 ura4-D18</i>	This study
YMD 1486	<i>scd1Δ::ura4+ ral1:scd1+:leu1+ cdc15-27D ade6 leu1-32 ura4-D18</i>	This study
YMD 1487	<i>scd1Δ::ura4+ ral1:scd1+:leu1+ cdc15ΔSH3 ade6 leu1-32 ura4-D18</i>	This study

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