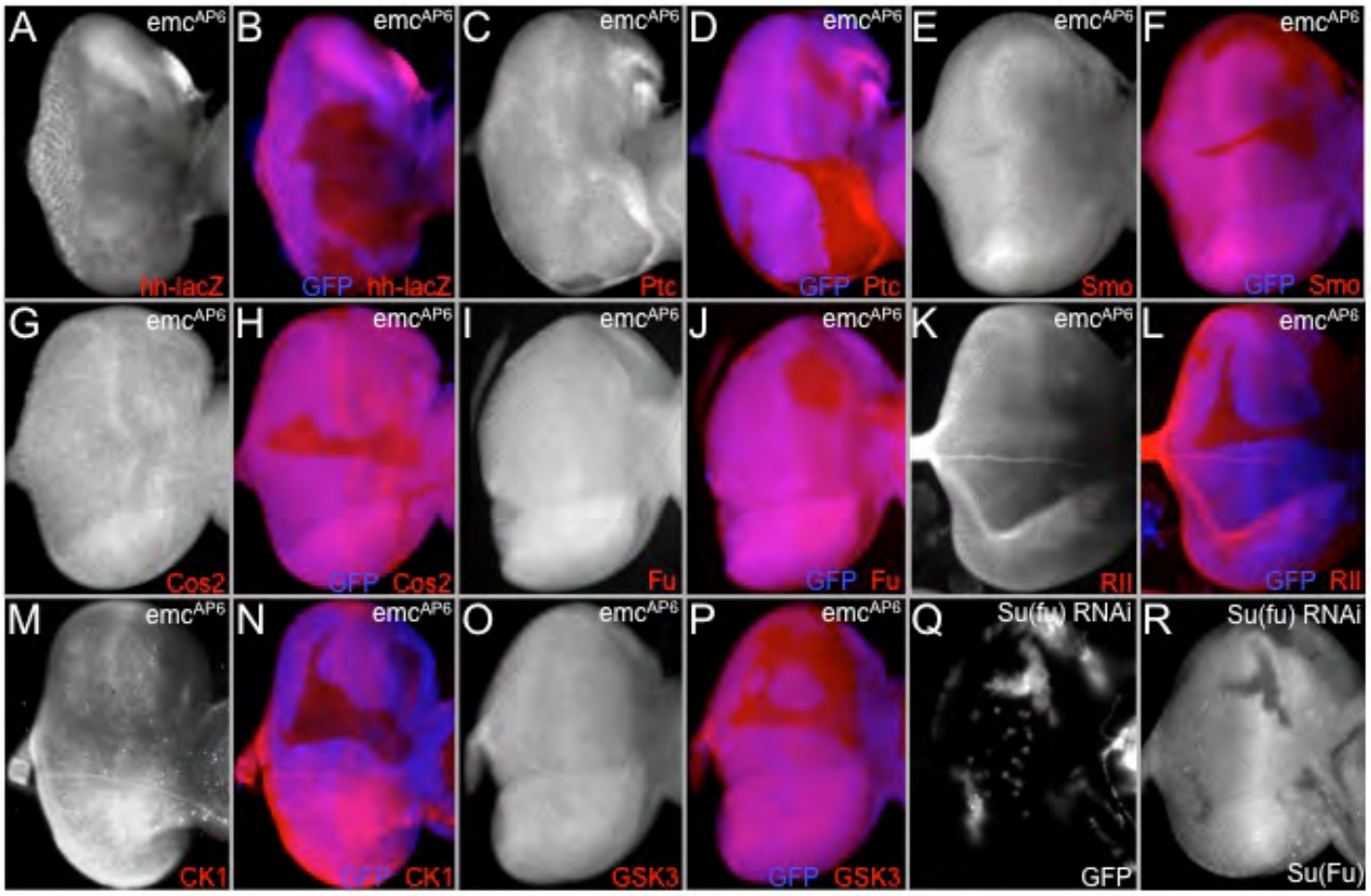

Fig. S1. Emc regulation of the Hedgehog signaling pathway. (**A-P**) Expression patterns of several Hedgehog signaling components in *emc* clones (*hs-flp[22]; FRT80B emc^{AP6}/FRT80B M(3)i55 Ubi-GFP*). (**Q**,**R**) Expression of Su(fu) RNAi in clones (*hs-flp[22]; Act5C>y+>GAL4, UAS-GFP; UAS-Su(fu) RNAi*) is sufficient to dramatically reduce the level of Su(fu) in the eye disc. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

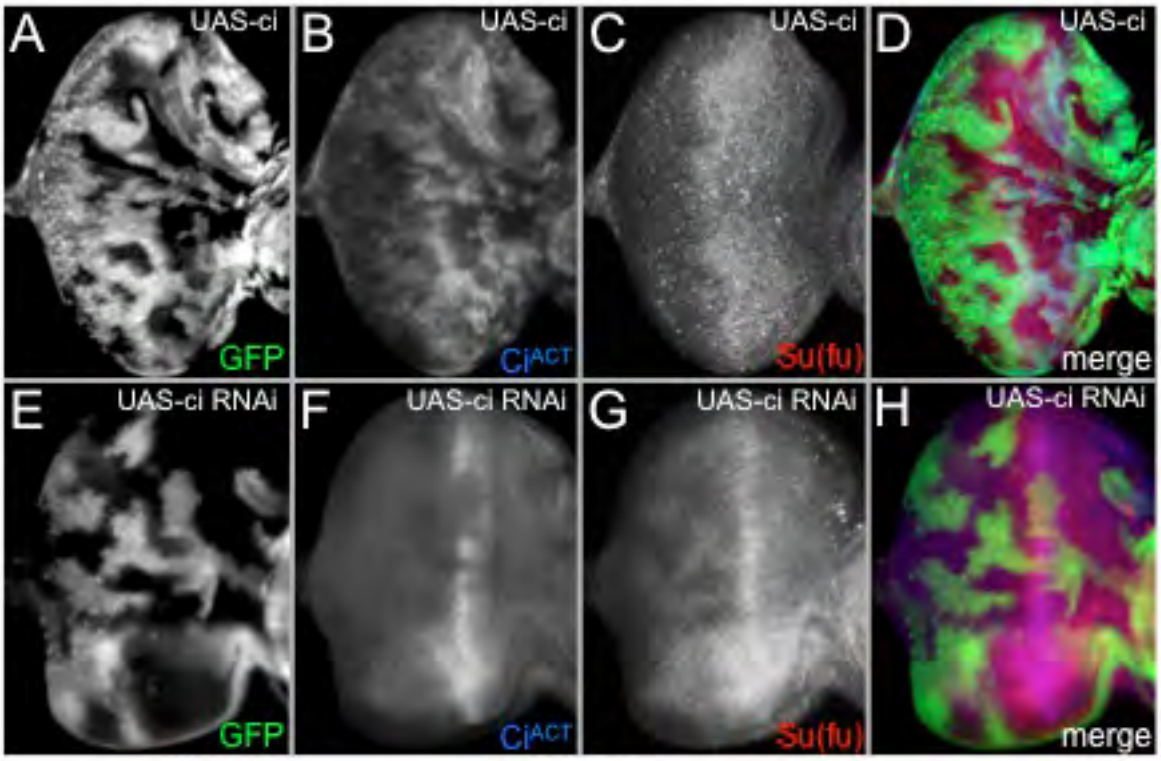

Fig. S2. Ci^{ACT} does not modulate Su(fu) expression. (**A-D**) Overexpression of full-length Ci (*hs-flp[22]; Act5C>y+>GAL4, UAS-GFP; UAS-ci*) does not result in an increase in Su(fu) expression. (**E-H**) Reductions in Ci levels (*hs-flp[22]; Act5C>y+>GAL4, UAS-GFP; UAS-ci RNAi*) do not reduce Su(fu) expression within the eye disc. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

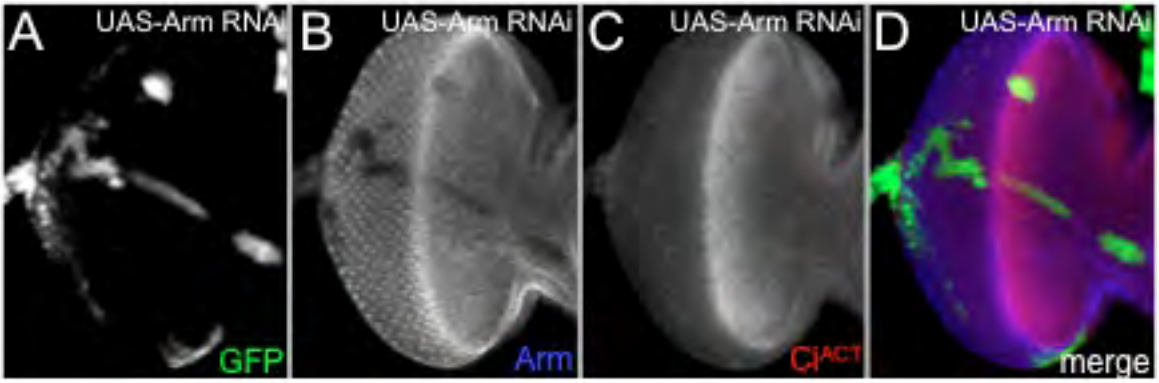

Fig. S3. Armadillo does not regulate Ci^{ACT} levels. (**A-D**) Reductions in Arm levels (*hs-flp[22]; Act5C>y+>GAL4, UAS-GFP; UAS-arm RNAi*) do not reduce Ci^{ACT} levels within the eye disc. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

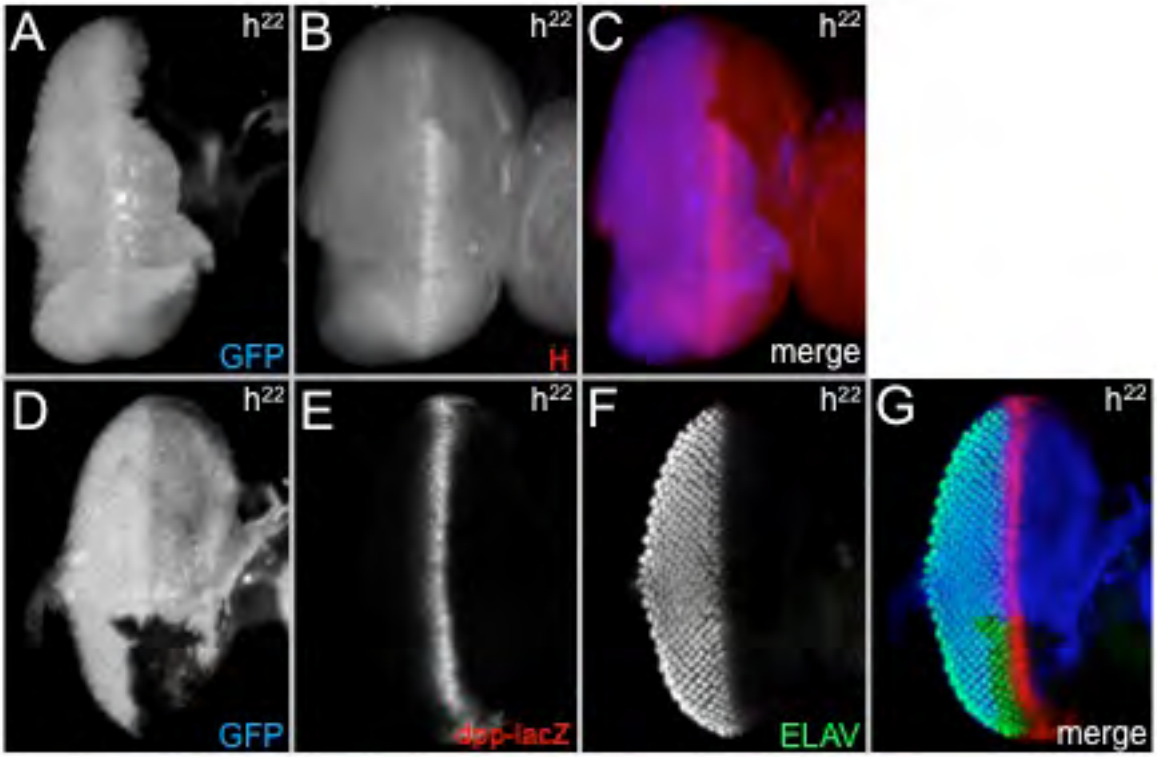

Fig. S4. The furrow does not accelerate through *h* mutant clones. (**A-C**) Hairy protein is absent in cells that are mutant for the h^{22} null allele (*hs-flp[22]; FRT80B* h^{22}*/FRT80B M(3)i55 Ubi-GFP*). (**D-G**) The furrow (assayed by dpp-lacZ and ELAV) does not accelerate through *h* mutant clones. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

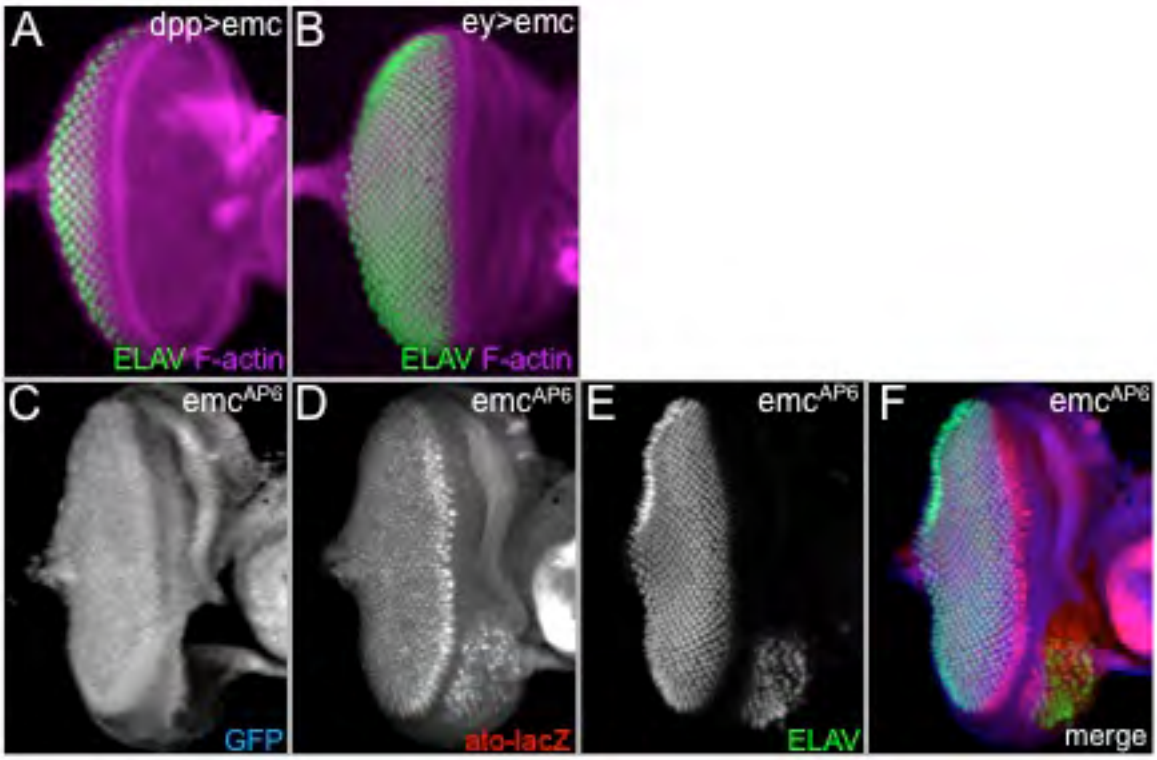

Fig. S5. Emc inhibits initiation of ectopic furrows but cannot prevent the initiation of the normal furrow. (**A**,**B**) Expression of *emc* with *dpp-GAL4* (A) or *ey-GAL4* (B) is insufficient to block initiation of the normal furrow. (**C-F**) *ato-lacZ* expression is activated in *emc* clones (*hs-flp[22]; FRT80B* emc^{AP6}*/FRT80B M(3)i55 Ubi-GFP*) that contact the margin. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

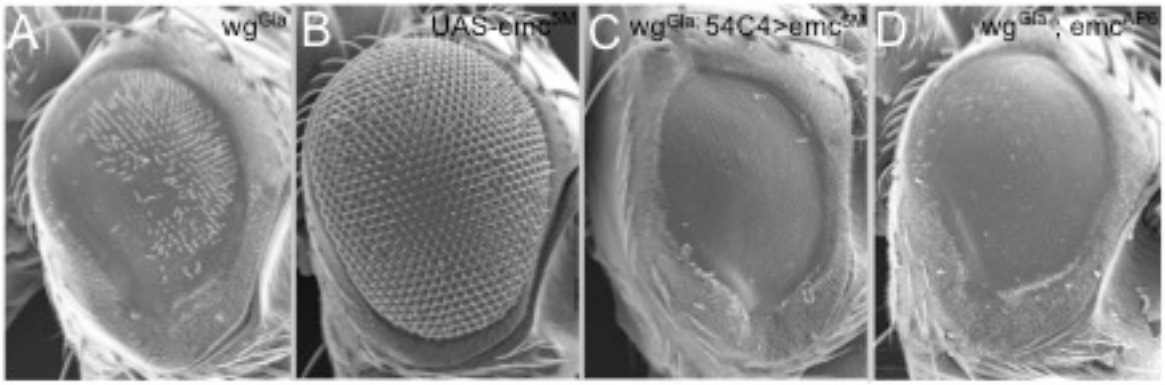

Fig. S6. Emc does not function downstream of the Wg pathway. Scanning electron microscope images of adult heads and compound eyes. (**A**) In the *wg*^{Gla} gain-of-function mutant, the photoreceptors are specified correctly but the cone and pigment cells fail to form properly, thus the adult eye has a flattened and glazed appearance. (**B**) Overexpression of *emc* by itself has no effect on eye development. (**C**) Expression of *emc* by *54C-GAL4*, which is expressed in the cone and pigment cells, fails to restore normal structure to the *wg*^{Gla} compound eye. (**D**) Removal of one copy of *emc* is also insufficient to suppress the rough eye phenotype of *wg*^{Gla}. Anterior is towards the right. All markers and abbreviated genotypes are listed in each panel.

Table S1. Raw data for charts in Fig. 1

Disc number	Time points (hours after egg lay)										
	78hr	81hr	84hr	87hr	90hr	93hr	96hr	99hr	102hr	105hr	108hr
1	0	4	6	9	7	8	10	14	15	17	21
2	0	4	7	8	9	8	9	13	14	19	22
3	0	2	5	8	8	7	10	14	11	16	17
4	0	3	6	8	7	8	9	14	15	18	22
5	0	3	5	8	7	8	7	13	11	17	21
6	0	4	4	8	8	7	9	14	14	19	21
7	0	3	3	9	7	10	6	15	14	17	17
8	0	3	4	8	6	9	9	12	10	17	18
9	0	3	3	8	7	9	11	14	11	16	18
10	0	5	5	9	7	8	10	13	15	16	21
11	0	3	6	8	7	8	10	14	15	20	22
12	0	3	4	9	7	8	7	12	17	17	22
13	0	4	5	8	7	8	10	12	16	18	21
14	0	4	3	8	7	8	9	13	16	17	20
15	0	3	4	9	7	8	10	13	12	19	19
16	0	3	4	9	6	7	10	13	11	18	21
17	0	1	5	7	7	9	10	13	13	17	20
18	0	4	5	5	6	7	9	13	13	17	20
19	0	2	6	6	6	8	11	14	12	18	21
20	0	3	4	8		8	10	14	14	19	20
21		5	5	8		8	11	13	13	20	22
22		4	4	8		7	10	14	11	19	23
23		6	4	9			8	13	13	19	21
24		2	5	8			11	13	16	18	21
25		2	4	7			8	14	13	18	23
26		2	6	9			8	14	16	19	21
27		3	3	9			9	13	16	18	21
28		5	4	8			9	14	13	19	24
29		3	6	7			10	13	13	18	21
30		3	5	9			8	13	13	18	20
31		5	6	8			9	13	13	18	
32		2	5	8			9	14	14	19	
33				8			9	13	16		
34				6				14	13		
35				5					12		
36									13		
Average row (ELAV)		3.31	4.72	7.91	7	8	9.24	13.38	13.53	17.97	20.7
Average row (total)		5.31	6.72	9.91	9	10	11.2	15.38	15.53	19.97	22.7
s.d.		1.12	1.05	1.07	0.75	0.76	1.2	0.697	1.797	1.092	1.643
s.e.m.		0.04	0.035	0.03	0.05	0.04	0.04	0.027	0.041	0.034	0.044