

Table S1 Quantitative scoring of missense alleles

Amino acid change and Allele	Region of protein	Planar polarity phenotype (extra tarsal joints)	Canonical phenotype (wing margin): Category	Canonical phenotype (wing margin): Proportion of anterior wing margin notched	Canonical phenotype (wing margin): Proportion of anterior wing margin with yellow bristles
C53F	CRD	2.7	Intermediate	0.07	0.01
C53Y	CRD	3.5	Strong	0.16	0.00
C107Y	CRD	2.9	Strong	0.40	0.01
P112L	CRD	2.3	Intermediate	0.02	0.05
R274C	ICL1	1.6	Rescued	0.00	0.37
R274H	ICL1	0.8	Rescued	0.00	0.44
R274H	ICL1	1.1	Rescued	0.00	0.52
P278L	ICL1	1.8	Intermediate	0.03	0.03
P278L	ICL1	2.3	Intermediate	0.08	0.03
P278S	ICL1	1	Rescued	0.00	0.45
P278S	ICL1	1	Rescued	0.00	0.38
E279K	ICL1	3.3	Rescued	0.00	0.19
E373K	ICL2	1	Rescued	0.00	0.29
E373K	ICL2	0.9	Rescued	0.00	0.47
H383L	TM4	1.3	Rescued	0.00	0.44
H383Y	TM4	1.7	Rescued	0.00	0.45
P390L	TM4	2.4	Intermediate	0.02	0.03
P390L	TM4	2.3	Intermediate	0.06	0.02
G444R	TM5	1.9	Strong	0.22	0.00
I451F	ICL3	2.1	Rescued	0.00	0.47
M469K	ICL3	2.3	Strong	0.16	0.00
M469T/G	ICL3/T	1	Rescued	0.00	0.36
I472K	TM6	1.8	Rescued	0.00	0.36
G545R	TM7	2.6	Strong	0.25	0.00
Y553X	C-	2.3	Intermediate	0.05	0.04
S554F	C-	2.3	Strong	0.19	0.03
W561X	C-	2.4	Rescued	0.00	0.25
W561X	C-	2.2	Rescued	0.00	0.24
W561X	C-	2.9	Intermediate	0.03	0.03
W561R	C-	2.1	Rescued	0.00	0.22