

**Dataset 2: List of *P* values**

	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. 1A</b>	(22°C) 0.0176	<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/+</i>	0.1848
		<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>UAS-dTrpA1/+</i>	0.0092
	(30°C) 0.0007	<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/+</i>	0.0019
		<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>UAS-dTrpA1/+</i>	0.0023
<b>Fig. 1B</b>	(22°C) 0.0714	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/+</i>	<0.0001
		<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>UAS-dTrpA1/+</i>	<0.0001
<b>Fig. 1C</b>	(22°C) 0.6701	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/+</i>	<0.0001
		<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>UAS-dTrpA1/+</i>	<0.0001
<b>Fig. 1D</b>	(22°C) 0.6701	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/+</i>	<0.0001
		<i>R72D07-GAL4/UAS-dTrpA1</i> V/S <i>UAS-dTrpA1/+</i>	<0.0001

	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. 3A</b>	(22°C) 0.0676	P values >0.05	P values >0.05

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	(30°C) <0.0001	<i>R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/+</i>	<0.0001
		<i>R43D01-GAL4/UAS-dTrpA1 V/S UAS-dTrpA1/+</i>	0.0146
<b>Fig. 3B</b>	(22°C) 0.3442	P values >0.05	P values >0.05
	(30°C) 0.0695	P values >0.05	P values >0.05
<b>Fig. 3C</b>	(22°C) 0.3743	P values >0.05	P values >0.05
	(30°C) 0.1913	P values >0.05	P values >0.05
<b>Fig. 3D</b>	(22°C) 0.4842	P values >0.05	P values >0.05
	(30°C) 0.2100	P values >0.05	P values >0.05

	<b>Kruskal Wallis P- value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. 4A</b>	(22°C) 0.2525	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>UAS-Dcr2/UAS-GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/UAS-dTrpA1</i>	<0.0001
		<i>UAS-Dcr2/UAS-GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/+; R43D01-GAL4/UAS-dTrpA1</i>	<0.0001
		<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/UAS- No RNAi; R43D01-GAL4/UAS-dTrpA1</i>	0.0074
<b>Fig. 4B</b>	(22°C) 0.2874	P values >0.05	P values >0.05
	(30°C) 0.1769	P values >0.05	P values >0.05

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<b>Fig. 4C</b>	(22°C) 0.0063	<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/UAS-dTrpA1</i>	0.0044
		<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/+; R43D01-GAL4/UAS-dTrpA1</i>	0.0148
		<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/UAS- No RNAi; R43D01-GAL4/UAS-dTrpA1</i>	0.0669
	(30°C) 0.6243	P values >0.05	P values >0.05
<b>Fig. 4D</b>	(22°C) 0.0025	<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/UAS-dTrpA1</i>	0.0018
		<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/+; R43D01-GAL4/UAS-dTrpA1</i>	0.0059
		<i>UAS-Dcr2/UAS- GAD1 RNAi; R43D01-GAL4/UAS-dTrpA1V/S UAS-Dcr2/UAS- No RNAi; R43D01-GAL4/UAS-dTrpA1</i>	0.1226
	(30°C) 0.6004	P values >0.05	P values >0.05

	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. 5A</b>	(25°C) 0.0128	<i>R43D01-GAL4/UAS-Kir2.1 v/s R43D01-GAL4/+</i>	0.1573
		<i>R43D01-GAL4/UAS-Kir2.1 v/s UAS-Kir2.1/+</i>	0.0066
<b>Fig. 5B</b>	(25°C) 0.4138	P values >0.05	P values >0.05
<b>Fig. 5C</b>	(25°C) <0.0001	<i>R43D01-GAL4/UAS-Kir2.1 v/s R43D01-GAL4/+</i>	<0.0001

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		<i>R43D01-GAL4/UAS-Kir2.1 v/s UAS-Kir2.1/+</i>	0.0015
<b>Fig. 5D</b>	(25°C) <0.0001	<i>R43D01-GAL4/UAS-Kir2.1 v/s R43D01-GAL4/+</i>	<0.0001
		<i>R43D01-GAL4/UAS-Kir2.1 v/s UAS-Kir2.1/+</i>	0.0015

	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. 6A</b>	(22°C) 0.1085	P values >0.05	P values >0.05
	(30°C) 0.0011	<i>LexAop2-GAL80/R43D01-LexA; R72D07-GAL4/UAS-dTrpA1 V/S R72D07-GAL4/UAS-dTrpA1</i>	0.0008
		<i>LexAop2-GAL80/R43D01-LexA; R72D07-GAL4/UAS-dTrpA1 V/S LexAop2-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i>	0.019
<b>Fig. 6B</b>	(22°C) 0.2524	P values >0.05	P values >0.05
	(30°C) 0.0026	<i>LexAop2-GAL80/R43D01-LexA; R72D07-GAL4/UAS-dTrpA1 V/S R72D07-GAL4/UAS-dTrpA1</i>	0.0021
		<i>LexAop2-GAL80/R43D01-LexA; R72D07-GAL4/UAS-dTrpA1 V/S LexAop2-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i>	0.0246
<b>Fig. 6C</b>	(22°C) 0.4230	P values >0.05	P values >0.05
	(30°C) 0.9474	P values >0.05	P values >0.05
<b>Fig. 6D</b>	(22°C) 0.5723	P values >0.05	P values >0.05
	(30°C) 0.9657	P values >0.05	P values >0.05

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	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. S2A</b>	(22°C) 0.8622	P values >0.05	P values >0.05
	(30°C) 0.0001	<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/UAS-dTrpA1</i>	>0.9999
		<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>TSHIRT-GAL80/+; R72D07-GAL4/+</i>	0.0006
<b>Fig. S2B</b>	(22°C) 0.7978	P values >0.05	P values >0.05
	(30°C) 0.0007	<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/UAS-dTrpA1</i>	>0.9999
		<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>TSHIRT-GAL80/+; R72D07-GAL4/+</i>	0.0029
<b>Fig. S2C</b>	(22°C) 0.3228	P values >0.05	P values >0.05
	(30°C) 0.0003	<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/UAS-dTrpA1</i>	0.6298
		<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>TSHIRT-GAL80/+; R72D07-GAL4/+</i>	0.0065
<b>Fig. S2D</b>	(22°C) 0.2585	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>R72D07-GAL4/UAS-dTrpA1</i>	0.7992
		<i>TSHIRT-GAL80/+; R72D07-GAL4/UAS-dTrpA1</i> V/S <i>TSHIRT-GAL80/+; R72D07-GAL4/+</i>	0.0016

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<b>Fig. S7A</b>	(22°C) 0.1136	P values >0.05	P values >0.05
	(30°C) <0.0001	<i>R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/+</i>	<0.0001
		<i>R43D01-GAL4/UAS-dTrpA1 V/S UAS-dTrpA1/+</i>	0.0014
<b>Fig. S7B</b>	(22°C) 0.0077	<i>R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/+</i>	0.0053
		<i>R43D01-GAL4/UAS-dTrpA1 V/S UAS-dTrpA1/+</i>	0.0517
	(30°C) <0.0001	<i>R43D01-GAL4/UAS-dTrpA1 V/S R43D01-GAL4/+</i>	<0.0001
		<i>R43D01-GAL4/UAS-dTrpA1 V/S UAS-dTrpA1/+</i>	0.0143

	<b>Kruskal Wallis P-value</b>	<b>Post-hoc Dunn's multiple comparisons test</b>	<b>Adjusted P-value</b>
<b>Fig. S8A</b>	(25°C) 0.0495	<i>UAS-Dcr2/UAS-GAD1 RNAi ; R43D01-GAL4 V/S UAS-Dcr2/+ ; R43D01-GAL4/+</i>	0.063
		<i>UAS-Dcr2/UAS- GAD1 RNAi ; R43D01-GAL4 V/S UAS-GAD1 RNAi/+</i>	0.0704
<b>Fig. S8B</b>	(25°C) 0.3558	P values >0.05	P values >0.05
<b>Fig. S8C</b>	(25°C) 0.0230	<i>UAS-Dcr2/UAS-GAD1 RNAi ; R43D01-GAL4 V/S UAS-Dcr2/+ ; R43D01-GAL4/+</i>	0.0291
		<i>UAS-Dcr2/UAS- GAD1 RNAi ; R43D01-GAL4 V/S UAS-GAD1 RNAi/+</i>	0.0404
<b>Fig. S8D</b>	(25°C) 0.0090	<i>UAS-Dcr2/UAS-GAD1 RNAi ; R43D01-GAL4 V/S UAS-Dcr2/+ ; R43D01-GAL4/+</i>	0.0125

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		<i>UAS-Dcr2/UAS- GAD1 RNAi ; R43D01- GAL4 V/S UAS-GAD1 RNAi/+</i>	0.0191
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