

Appendix

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- **Appendix Table S1**

Appendix Table S1: Statistical Analysis Corresponding to the Data Presented in Figures

Figure	Panel	Sample Size (n = biological replicates)	Statistical Test	p-value
1	G	20	Simple Linear Regression	0.0274
1	H	20	Simple Linear Regression	0.0023
2	F	WT: 3	unpaired t test	0.0002
		BlaJ: 3		
2	G	WT: 3	unpaired t test	0.0063
		BlaJ: 3		
2	H	6-month spine: 4	Two-way ANOVA	0.0249
		6-month quad: 4	Holm-Sidak's multiple comparisons test	6 mo. spine vs. 6 mo. quad: 0.0493
		8-month spine: 4	Holm-Sidak's multiple comparisons test	8 mo. spine vs. 8 mo. quad: 0.0151
		8-month quad: 4	Holm-Sidak's multiple comparisons test	10 mo. spine vs. 10 mo. quad: 0.0025
		10-month spine: 4	Holm-Sidak's multiple comparisons test	6 mo. spine vs. 8 mo. spine: 0.0150
		10-month quad: 4	Holm-Sidak's multiple comparisons test	6 mo. spine vs. 10 mo. spine: 0.0028
		22-month spine: 4	Holm-Sidak's multiple comparisons test	6 mo. spine vs. 22 mo. spine: 0.0079
		22-month quad: 4	Holm-Sidak's multiple comparisons test	6 mo. quad vs. 10 mo. quad: 0.0330
			Holm-Sidak's multiple comparisons test	6 mo. quad vs. 22 mo. quad: 0.0027
3	D	WT: 6	unpaired t test	0.0033
		BlaJ: 9		
3	E	Forelimb WT: 6	unpaired t test	0.0511
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0347
		Hindlimb BlaJ: 10		
3	F	Forelimb WT: 6	unpaired t test	0.0332
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0263
		Hindlimb BlaJ: 10		
3	G	Forelimb WT: 6	unpaired t test	0.0386
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0268
		Hindlimb BlaJ: 10		
3	H	Forelimb WT: 6	unpaired t test	0.3434
		Forelimb BlaJ: 10		
		Hindlimb WT: 5	Mann-Whitney test	0.0736
		Hindlimb BlaJ: 10		
3	K	WT: 6	unpaired t test	0.0191
		BlaJ: 9		
3	L	Forelimb WT: 6	unpaired t test	<0.0001
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0052
		Hindlimb BlaJ: 10		

3	M	Forelimb WT: 6	unpaired t test	<0.0001
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0031
		Hindlimb BlaJ: 10		
3	N	Forelimb WT: 6	unpaired t test	<0.0001
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.0031
		Hindlimb BlaJ: 10		
3	O	Forelimb WT: 6	unpaired t test	0.001
		Forelimb BlaJ: 10		
		Hindlimb WT: 6	unpaired t test	0.009
		Hindlimb BlaJ: 10		
5	E	6-month multifidus: 3	Two-way ANOVA	0.0041
		6-month longissimus: 3	Holm-Sidak's multiple comparisons test	6 mo. Iliocostalis vs. 8 mo. Iliocostalis: 0.0524
		6-month iliocostalis: 3	Holm-Sidak's multiple comparisons test	6 mo. Iliocostalis vs. 10 mo. Iliocostalis: 0.0005
		8-month multifidus: 3		
		8-month longissimus: 3		
		8-month iliocostalis: 3		
		10-month multifidus: 3		
		10-month longissimus: 3		
		10-month iliocostalis: 3		
5	F	6-month multifidus: 3	Two-way ANOVA	<0.0001
		6-month longissimus: 3	Holm-Sidak's multiple comparisons test	6 mo. Iliocostalis vs. 8 mo. Iliocostalis: 0.0278
		6-month iliocostalis: 3	Holm-Sidak's multiple comparisons test	6 mo. Iliocostalis vs. 10 mo. Iliocostalis: 0.0140
		8-month multifidus: 3	Holm-Sidak's multiple comparisons test	8 mo. Iliocostalis vs. 10 mo. Iliocostalis: 0.0415
		8-month longissimus: 3	Holm-Sidak's multiple comparisons test	6 mo. Longissimus vs. 10 mo. Longissimus: 0.0278
		8-month iliocostalis: 3	Holm-Sidak's multiple comparisons test	8 mo. Longissimus vs. 10 mo. Longissimus: 0.0479
		10-month multifidus: 3		
		10-month longissimus: 3		
		10-month iliocostalis: 3		
6	C	WT: 3	unpaired t test	<0.0001
		BlaJ: 3		
6	E	Spine: 4	unpaired t test	<0.0001
		Quad: 4		
7	B	WT: 4	Wald and Benjamini Hochberg test	<0.05
		BlaJ: 4		
7	H	DMSO: 4	Mann-Whitney test	DMSO vs. MMP inhibitor: 0.0286
		MMP inhibitor: 4		DMSO vs. HDAC inhibitor: 0.0286
		HDAC inhibitor: 4		DMSO vs. GSK3 inhibitor: 0.0286
		GSK3 inhibitor: 4		
8	B	<i>axin2</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0368

		<i>axin2</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0037
		<i>axin2</i> BlaJ+LY: 3		
		<i>Ccnd2</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0009
		<i>Ccnd2</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.1371
		<i>Ccnd2</i> BlaJ+LY: 3		
		<i>Wnt1</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.1201
		<i>Wnt1</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0143
		<i>Wnt1</i> BlaJ+LY: 3		
		<i>Wnt5a</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.8073
		<i>Wnt5a</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0231
		<i>Wnt5a</i> BlaJ+LY: 3		
		<i>Wnt5b</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0142
		<i>Wnt5b</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0108
		<i>Wnt5b</i> BlaJ+LY: 3		
		<i>Wnt10a</i> WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0139
		<i>Wnt10a</i> BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0012
		<i>Wnt10a</i> BlaJ+LY: 3		
8	D	active beta-catenin/HSP90 WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0402
		active beta-catenin/HSP90 BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0274
		active beta-catenin/HSP90 BlaJ+LY: 3		
		active beta-catenin/total beta-catenin WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0095
		active beta-catenin/total beta-catenin BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0309
		active beta-catenin/total beta-catenin BlaJ+LY: 3		
		p-C-Jun/C-Jun WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.2344
		p-C-Jun/C-Jun BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.1171
		p-C-Jun/C-Jun BlaJ+LY: 3		
		pGSK3beta(Ser9)/GSK3beta WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.0587
		pGSK3beta(Ser9)/GSK3beta BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.1664
		pGSK3beta(Ser9)/GSK3beta BlaJ+LY: 3		
		pGSK3beta/3alpha (Tyr216/Tyr279)/GSK3beta WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.7931

		pGSK3beta/3alpha (Tyr216/Tyr279)/GSK3beta BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.0002
		pGSK3beta/3alpha (Tyr216/Tyr279)/GSK3beta BlaJ+LY: 3		
		PPARy/HSP90 WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: <0.0001
		PPARy/HSP90 BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: <0.0001
		PPARy/HSP90 BlaJ+LY: 3		
		Total beta-catenin/HSP90 WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.6222
		Total beta-catenin/HSP90 BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.1239
		Total beta-catenin/HSP90 BlaJ+LY: 3		
		Total GSK3beta/HSP90 WT+DMSO: 3	unpaired t test	WT+DMSO vs. BlaJ+DMSO: 0.3609
		Total GSK3beta/HSP90 BlaJ+DMSO: 3	unpaired t test	BlaJ+DMSO vs. BlaJ+LY: 0.9574
		Total GSK3beta/HSP90/HSP90 BlaJ+LY: 3		
9	D	Control: 8	unpaired t test	0.0027
		LY: 6		
9	G	Control: 3	unpaired t test	0.048
		LY: 3		