

Participation of the serine protease Jonah66Ci in the *Drosophila* anti-nematode immune response

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S1 Table. Statistical analysis of relative abundance of *Jonah66Ci* estimated using RNAseq and qRT-PCR (Fig. 1A) in *Drosophila* larvae using one-way ANOVA with Tukey *post-hoc* test for individual comparisons.

Time-point	Comparisons	Individual p values
6h	RNAseq Sy vs qRT-PCR Sy	0.9669
	RNAseq Ax vs qRt-PCR Ax	0.9998
	RNAseq Sy vs RNAseq Ax	0.9431
	qRT-PCR Sy vs qRT-PCR Ax	0.9992
24h	RNAseq Sy vs qRT-PCR Sy	0.9835
	RNAseq Ax vs qRt-PCR Ax	>0.9999
	RNAseq Sy vs RNAseq Ax	>0.9999
	qRT-PCR Sy vs qRT-PCR Ax	0.9993
RNAseq	Sy 6h vs Sy 24h	0.9995
qRT-PCR	Ax 6h vs Ax 24h	0.8498
	Sy 6h vs Sy 24h	0.9987
	Ax 6h vs Ax 24h	0.7912
	ANOVA Summary	
F		0.94
P value		0.5103
P value summary		ns
Significant diff. among means (P<0.05)		No
R square		0.34

ns: non-significant

S2 Table. Statistical analysis of *Jonah66Ci* gene expression in *Drosophila* larvae (Fig. 1B) using one-way ANOVA and Tukey *post-hoc* test.

Treatment/Method	Comparisons	p value
Gut 6h	C vs Sy	0.0190
	C vs Ax	0.3487
	Sy vs Ax	0.9422
Gut 24	C vs Sy	>0.9999
	C vs Ax	0.4192
	Sy vs Ax	0.2697
Gut-C	6h vs 24h	0.9384
Gut-Sy		0.0073
Gut-Ax		0.0452
ANOVA Summary		
F		11
P value		<0.0001
P value summary		****
Significant diff. among means (P<0.05)		Yes
R square		0.79

S3 Table. Comparison of survival curves of *Drosophila* larvae (Fig. 2B) using Log-rank (Mantel-Cox) test.

Comparisons	<i>p</i> values
<i>yw</i> C vs <i>Jonah66Ci</i> C	>0.9999
<i>yw</i> Sy vs <i>Jonah66Ci</i> Sy	0.0801
<i>yw</i> Ax vs <i>Jonah66ci</i> Ax	0.0028
<i>yw</i> C vs <i>yw</i> Sy	<0.0001
<i>yw</i> C vs <i>yw</i> Ax	<0.0001
<i>yw</i> Sy vs <i>yw</i> Ax	0.3795
<i>Jonah66Ci</i> C vs <i>Jonah66Ci</i> Sy	<0.0001
<i>Jonah66Ci</i> C vs <i>Jonah66Ci</i> Ax	<0.0001
<i>Jonah66Ci</i> Sy vs <i>Jonah66Ci</i> Ax	0.6637
Log-rank (Mantel-Cox) test	
Chi Square	137
df	5
P value	<0.0001
P value summary	****
Significant?	Yes

S4 Table. Statistical analysis of AMP gene expression in *Drosophila* larvae (Fig. 3A-D) using one-way ANOVA and Tukey *post-hoc* test.

		<i>Attacin</i>	<i>Drosomycin</i>	<i>Puckered</i>	<i>TOT-A</i>
yw 6h	C vs Sy	>0.9999	>0.9999	>0.9999	0.6064
yw 6h	C vs Ax	>0.9999	>0.9999	>0.9999	0.9948
yw 6h	Sy vs Ax	>0.9999	>0.9999	0.9389	0.9262
yw 24h	C vs Sy	<0.0001	0.9777	>0.9999	>0.9999
yw 24h	C vs Ax	0.9996	0.5999	0.9974	0.9933
yw 24h	Sy vs Ax	<0.0001	0.9972	0.9982	0.9967
yw C	6h vs 24h	>0.9999	0.9963	>0.9999	0.9999
yw Sy	6h vs 24h	<0.0001	>0.9999	>0.9999	0.6850
yw Ax	6h vs 24h	0.9988	0.9974	0.9918	0.9681
<i>Jonah66Ci</i> 6h	C vs Sy	>0.9999	>0.9999	0.9926	>0.9999
<i>Jonah66Ci</i> 6h	C vs Ax	>0.9999	>0.9999	>0.9999	>0.9999
<i>Jonah66Ci</i> 6h	Sy vs Ax	>0.9999	>0.9999	0.9852	>0.9999
<i>Jonah66Ci</i> 24h	C vs Sy	0.5209	0.9869	>0.9999	>0.9999
<i>Jonah66Ci</i> 24h	C vs Ax	>0.9999	>0.9999	>0.9999	>0.9999
<i>Jonah66Ci</i> 24h	Sy vs Ax	0.5205	0.9873	>0.9999	>0.9999
<i>Jonah66Ci</i> C	6h vs 24h	>0.9999	>0.9999	>0.9999	0.9995
<i>Jonah66Ci</i> Sy	6h vs 24h	0.5201	0.9949	0.9910	0.9610
<i>Jonah66Ci</i> Ax	6h vs 24h	>0.9999	>0.9999	>0.9999	0.9998
C 6h		>0.9999	>0.9999	>0.9999	0.9922
Sy 6h	<i>yw vs Jonah66Ci</i>	>0.9999	0.9981	0.4203	0.9999
Ax 6h		>0.9999	0.9972	0.9879	>0.9999
C 24h		>0.9999	>0.9999	0.9997	>0.9999
Sy 24h	<i>yw vs Jonah66Ci</i>	<0.0001	>0.9999	0.9941	>0.9999
Ax 24h		0.9998	0.6763	>0.9999	0.9999
ANOVA		Summary			
F		7	0.87	1.1	0.85
P value		<0.0001	0.5797	0.3832	0.5999
P value summary		****	ns	ns	ns
Significant diff. among means (P<0.05)		Yes	No	No	No
R square		0.88	0.25	0.35	0.3

ns: non-significant

S5 Table. Statistical analysis of AMP gene expression in *Drosophila* larvae (Fig. 4A-D) using one-way ANOVA and Tukey *post-hoc* test.

		<i>Drosomycin</i>	<i>Defensin</i>	<i>Diptericin</i>	<i>Cecropin</i>
yw gut	C vs Sy	0.0006	>0.9999	0.4652	>0.9999
	C vs Ax	>0.9999	>0.9999	>0.9999	>0.9999
	Sy vs Ax	0.0005	>0.9999	0.4683	>0.9999
yw larvae	C vs Sy	0.6483	>0.9999	0.0203	0.8635
	C vs Ax	0.9994	>0.9999	>0.9999	>0.9999
	Sy vs Ax	0.9924	>0.9999	0.0198	0.9124
<i>Jonah66i</i> gut	C vs Sy	>0.9999	>0.9999	>0.9999	0.0002
	C vs Ax	>0.9999	>0.9999	>0.9999	>0.9999
	Sy vs Ax	>0.9999	>0.9999	>0.9999	0.0001
<i>Jonah66i</i> larvae	C vs Sy	>0.9999	0.0152	>0.9999	>0.9999
	C vs Ax	>0.9999	>0.9999	>0.9999	>0.9999
	Sy vs Ax	>0.9999	0.0817	>0.9999	>0.9999
Gut- C	<i>yw vs Jonah66Ci</i>	>0.9999	>0.9999	>0.9999	>0.9999
Gut- Sy		0.0004	>0.9999	0.6204	0.0002
Gut- Ax		>0.9999	>0.9999	>0.9999	>0.9999
Larvae- C	<i>yw vs Jonah66Ci</i>	>0.9999	>0.9999	>0.9999	>0.9999
Larvae- Sy		0.5225	0.0188	0.0441	0.9882
Larvae- Ax		0.9985	>0.9999	>0.9999	>0.9999
yw-C	gut vs larvae	>0.9999	>0.9999	>0.9999	>0.9999
yw-Sy		0.0391	>0.9999	0.9426	0.9840
yw-Ax		0.9998	>0.9999	>0.9999	>0.9999
<i>Jonah66i</i> -C	gut vs larvae	>0.9999	>0.9999	>0.9999	>0.9999
<i>Jonah66i</i> -Sy		>0.9999	0.0171	>0.9999	0.0005
<i>Jonah66i</i> -Ax		>0.9999	>0.9999	>0.9999	>0.9999
ANOVA		Summary			
F		4.5	2.6	2.8	5.4
P value		0.0002	0.0165	0.0104	0.0001
P value summary		***	*	*	***
Significant diff. among means (P<0.05)		Yes	Yes	Yes	Yes
R square		0.55	0.44	0.49	0.56

S6 Table. Statistical analysis of *Wingless* gene expression and number of PH3 positive cells in *Drosophila* larvae (Fig. 5A, C) using one-way ANOVA and Tukey *post-hoc* test.

	Comparison	<i>Wingless</i>	PH3
<i>yw</i>	C vs Sy	>0.9999	0.0848
	C vs Ax	0.9887	0.0278
	Sy vs Ax	0.9943	>0.9999
<i>Jonah66Ci</i>	C vs Sy	0.9985	>0.9999
	C vs Ax	0.1648	0.0131
	Sy vs Ax	0.1377	0.0148
C	<i>yw vs Jonah66Ci</i>	0.0084	0.0008
Sy		0.0086	0.7032
Ax		0.2663	0.2203
ANOVA Summary			
F		8.8	7
P value		0.0006	0.0002
P value summary		***	***
Significant diff. among means (P<0.05)		Yes	Yes
R square		0.76	0.52

S7 Table. Statistical analysis of number of EEs in *Drosophila* larvae (Fig. 6B) using one-way ANOVA and Tukey *post-hoc* test.

	Comparison	EE
<i>yw</i>	C vs Sy	0.0286
	C vs Ax	0.9993
	Sy vs Ax	0.0179
<i>Jonah66Ci</i>	C vs Sy	0.0182
	C vs Ax	0.0131
	Sy vs Ax	>0.9999
C	<i>yw vs Jonah66Ci</i>	0.0048
Sy		0.1018
Ax		0.9798
ANOVA Summary		
F		6.7
P value		0.0002
P value summary		***
Significant diff. among means (P<0.05)		Yes
R square		0.51

S8 Table. Statistical analysis of number of *Esg* positive cells in *Drosophila* larvae (Fig. 7B) using one-way ANOVA and Tukey *post-hoc* test.

	Comparison	Esg
<i>yw</i>	C vs Sy	0.3862
	C vs Ax	0.9829
	Sy vs Ax	0.1510
<i>Jonah66Ci</i>	C vs Sy	0.0559
	C vs Ax	0.1266
	Sy vs Ax	0.9997
C Sy Ax	<i>yw vs Jonah66Ci</i>	0.3954 0.0539 >0.9999
ANOVA Summary		
F		3.6
P value		0.0125
P value summary		*
Significant diff. among means (P<0.05)		Yes
R square		0.41

S9 Table. Statistical analysis of NO, ROS and feeding (food-dye) levels in *Drosophila* larvae (Fig. 8A-C) using one-way ANOVA and Tukey *post-hoc* test.

	Comparison	NO	ROS	Food-dye
<i>yw</i>	C vs Sy	0.3827	0.9979	0.7267
	C vs Ax	0.3672	0.9994	0.3563
	Sy vs Ax	0.0320	0.9715	0.0204
<i>Jonah66Ci</i>	C vs Sy	>0.9999	0.9948	>0.9999
	C vs Ax	>0.9999	0.8083	0.8846
	Sy vs Ax	>0.9999	0.9736	0.9415
C	<i>yw vs Jonah66Ci</i>	0.2060	0.9871	>0.9999
Sy		0.0123	0.9995	0.8383
Ax		>0.9999	0.9996	0.0249
ANOVA Summary				
F		6.2	4.2	2.7
P value		0.0071	0.8230	0.0824
P value summary		**	ns	ns
Significant diff. among means (P<0.05)		Yes	No	No
R square		0.76	0.15	0.55

ns: non-significant