

Supplemental table: Differential expression of equine toll-like receptors and their associated pathway genes within the stallion's reproductive tract; values are mean \pm SEM.

Gene	Testis (fpkm)	Epididymal head (fpkm)	Epididymal body (fpkm)	Epididymal tail (fpkm)	p value
TLR1	0.24 \pm 0.05 ^a	4.21 \pm 2.02 ^b	2.39 \pm 0.49 ^{ab}	3.35 \pm 0.62 ^{ab}	0.049
TLR2	0.57 \pm 0.11 ^a	1.79 \pm 0.44 ^b	1.66 \pm 0.33 ^{ab}	2.00 \pm 0.22 ^b	0.008
TLR3	1.57 \pm 0.4 ^a	4.39 \pm 0.66 ^b	3.31 \pm 0.41 ^b	2.10 \pm 0.32 ^a	0.001
TLR4	0.01 \pm 0.01	0.07 \pm 0.04	0.05 \pm 0.02	0.04 \pm 0.01	0.237
TLR5	0.12 \pm 0.08 ^a	1.53 \pm 0.33 ^b	2.54 \pm 0.24 ^c	2.01 \pm 0.23 ^{b,c}	< 0.0001
TLR6	0.28 \pm 0.05 ^a	0.72 \pm 0.37 ^a	0.98 \pm 0.13 ^a	2.70 \pm 0.45 ^b	< 0.0001
TLR7	0.1 \pm 0.02 ^a	1.23 \pm 0.24 ^b	1.07 \pm 0.22 ^b	0.60 \pm 0.08 ^{ab}	0.0002
TLR8	0.1 \pm 0.03 ^a	0.28 \pm 0.08 ^b	0.42 \pm 0.12 ^b	0.18 \pm 0.04 ^a	0.026
TLR9	0.1 \pm 0.02 ^a	0.32 \pm 0.09 ^b	0.16 \pm 0.04 ^{ab}	0.1 \pm 0.02 ^a	0.008
TLR10	0.03 \pm 0.01	1.95 \pm 1.39	0.48 \pm 0.14	0.69 \pm 0.15	0.212
TLR11	0.1 \pm 0.02	0.1 \pm 0.04	0.04 \pm 0.02	0.03 \pm 0.01	0.143
TLR12	0.11 \pm 0.02	0.30 \pm 0.14	0.15 \pm 0.04	0.15 \pm 0.02	0.351
CD14	0.05 \pm 0.02 ^a	0.25 \pm 0.1 ^b	0.09 \pm 0.02 ^a	0.05 \pm 0.02 ^a	0.062
IFNB1	0 \pm 0	0 \pm 0	0.07 \pm 0.04	0.07 \pm 0.04	0.269
IFNAR1	13.5 \pm 1.2	10.6 \pm 1.7	12.9 \pm 1.9	10.7 \pm 0.8	0.389
RAC1	40.9 \pm 4.7 ^a	139.8 \pm 13.5 ^{b,c}	125.9 \pm 7.7 ^b	163.7 \pm 7.8 ^c	< 0.0001
TOLLIP	64.5 \pm 9.2 ^a	37.8 \pm 7.2 ^b	46.9 \pm 3.9 ^{a,b}	39.7 \pm 5.6 ^{a,b}	0.037
MYD88	5.3 \pm 0.9 ^a	14.4 \pm 1.2 ^b	18.3 \pm 1.3 ^{b,c}	22.1 \pm 1.2 ^c	< 0.0001
TIRAP	54.3 \pm 4.5 ^a	16.4 \pm 2 ^b	18.6 \pm 1.9 ^b	18.5 \pm 1.4 ^b	< 0.0001
TICAM2	3.1 \pm 0.2 ^a	10 \pm 0.9 ^b	5.9 \pm 0.8 ^c	5.8 \pm 0.6 ^c	< 0.0001
TICAM1	1.2 \pm 0.1 ^a	8.8 \pm 1.4 ^b	7.3 \pm 0.5 ^b	9.9 \pm 0.6 ^b	< 0.0001
FADD	6.6 \pm 0.6 ^a	15.7 \pm 2.5 ^b	20.1 \pm 1.5 ^b	16.9 \pm 1.4 ^b	< 0.0001
PIK3CG	0.4 \pm 0.1 ^a	0.7 \pm 0.1 ^{ab}	0.84 \pm 0.19 ^b	0.4 \pm 0.03 ^a	0.017
PIK3R1	7.6 \pm 0.9 ^a	21.0 \pm 2.7 ^b	19.4 \pm 2.1 ^{ab}	35.9 \pm 2.3 ^c	< 0.0001
PIK3CA	6.5 \pm 0.8 ^a	6.3 \pm 0.9 ^a	8.7 \pm 0.9 ^{ab}	10.5 \pm 1.2 ^b	0.019
PIK3CB	7.3 \pm 0.8 ^{ab}	13.4 \pm 2.9 ^b	5.8 \pm 0.8 ^a	6.3 \pm 1.0 ^a	0.009
PIK3CD	8.0 \pm 0.6 ^a	5.1 \pm 0.5 ^b	2.9 \pm 0.5 ^c	2.8 \pm 0.2 ^c	< 0.0001
PIK3R3	338.8 \pm 74.4 ^a	2.5 \pm 1.9 ^b	2.2 \pm 0.8 ^b	0.6 \pm 0.2 ^b	< 0.0001
PIK3R2	14.9 \pm 2.8 ^a	38.1 \pm 4.2 ^b	56.4 \pm 8.2 ^{bc}	60.9 \pm 4.8 ^c	< 0.0001
AKT1	18.5 \pm 2.6 ^a	66.7 \pm 18.2 ^{ab}	71.8 \pm 16.6 ^{ab}	144.2 \pm 33.2 ^b	0.002
AKT2	77.5 \pm 1.5 ^a	50.1 \pm 3.8 ^b	50.9 \pm 3.5 ^b	69.2 \pm 4.6 ^a	< 0.0001
AKT3	14.5 \pm 1.1 ^a	6.9 \pm 0.5 ^b	7.0 \pm 1.6 ^b	15.7 \pm 1.8 ^a	< 0.0001
CASP8	2.0 \pm 0.1 ^a	12.9 \pm 2.9 ^b	5.4 \pm 0.3 ^a	8.9 \pm 0.8 ^b	< 0.0001
IRAK1	19.5 \pm 1.3 ^a	50.1 \pm 4.6 ^b	55.8 \pm 3.7 ^b	91.9 \pm 5.0 ^c	< 0.0001
IRAK4	4.4 \pm 0.5 ^a	4.2 \pm 0.5 ^a	6.1 \pm 0.7 ^a	6.8 \pm 0.4 ^b	0.007
TRAF6	8.9 \pm 0.3 ^a	14.7 \pm 1.6 ^b	8.9 \pm 0.3 ^a	11.5 \pm 0.5 ^a	< 0.0001
MAP3K7	8.1 \pm 0.6 ^{ab}	6.9 \pm 1.3 ^b	7.7 \pm 0.9 ^b	11.6 \pm 1.1 ^a	0.013
RIPK1	10.1 \pm 0.9 ^a	16.4 \pm 3.3 ^a	18.9 \pm 1.7 ^{ab}	24.8 \pm 1.7 ^b	0.0002
IKBKB	9.6 \pm 0.6 ^a	26.9 \pm 1.3 ^b	31.0 \pm 1.1 ^b	51.5 \pm 3.5 ^c	< 0.0001
IKBKG	2.5 \pm 0.2 ^a	7.8 \pm 0.8 ^b	8.2 \pm 0.8 ^b	9.0 \pm 1.1 ^b	< 0.0001
NFKB1	3.7 \pm 0.3 ^a	16.9 \pm 1.4 ^b	16.5 \pm 0.8 ^b	18.5 \pm 0.4 ^b	< 0.0001
NFKBIA	11.1 \pm 0.9 ^a	47.8 \pm 8.1 ^b	37.4 \pm 6.2 ^b	56.7 \pm 4.8 ^b	< 0.0001
CHUK	20.9 \pm 1.5 ^a	8.0 \pm 1.3 ^b	15.6 \pm 3.8 ^{ab}	19.5 \pm 2.5 ^a	0.008
RELA	21.1 \pm 1.5 ^a	43.9 \pm 1.9 ^b	48.0 \pm 3.0 ^b	58.2 \pm 3.2 ^c	< 0.0001
MAP3K8	1.2 \pm 0.1	1.1 \pm 0.2	1.1 \pm 0.4	1.1 \pm 0.1	0.986
MAP2K1	11.4 \pm 0.7	10.0 \pm 0.7	10.9 \pm 1.1	13.6 \pm 1.4	0.094
MAP2K2	26.5 \pm 1.6 ^a	45.0 \pm 4.8 ^b	47.3 \pm 2.7 ^b	44.1 \pm 1.4 ^b	< 0.0001

MAP2K3	10.0 ± 0.8 ^a	17.5 ± 2.9 ^{ab}	18.2 ± 2.5 ^{ab}	18.5 ± 2.1 ^b	0.025
MAP2K4	7.1 ± 0.7 ^a	9.2 ± 1.1 ^a	10.7 ± 1.6 ^{ab}	13.6 ± 0.6 ^b	0.001
MAP2K6	0.7 ± 0.1 ^a	3.7 ± 1.2 ^b	4.1 ± 0.9 ^b	2.8 ± 0.5 ^{ab}	0.016
MAP2K7	8.2 ± 0.5 ^a	14.7 ± 1.3 ^b	17.0 ± 1.6 ^b	17.9 ± 1.1 ^b	< 0.0001
MAPK1	19.1 ± 1.8	18.9 ± 3.1	21.4 ± 3.3	24.9 ± 2.4	0.376
MAPK10	2.9 ± 0.5 ^a	0.7 ± 0.1 ^b	0.4 ± 0.2 ^b	0.2 ± 0.1 ^b	< 0.0001
MAPK11	19.9 ± 2.2 ^a	14.2 ± 1.8 ^a	8.1 ± 1.8 ^b	5.3 ± 0.9 ^b	< 0.0001
MAPK12	18.9 ± 2.2 ^a	12.3 ± 1.6 ^b	6.7 ± 1.3 ^b	6.9 ± 1.0 ^b	< 0.0001
MAPK13	16.0 ± 1.8 ^a	53.2 ± 15.4 ^b	19.8 ± 10.9 ^{ab}	47.4 ± 3.1 ^{ab}	0.014
MAPK14	9.9 ± 1.2 ^a	10.6 ± 0.7 ^a	15.1 ± 0.9 ^b	14.0 ± 1.4 ^{ab}	0.006
MAPK3	25.5 ± 4.5 ^a	36.8 ± 13.6 ^{ab}	58.1 ± 6.9 ^b	38.0 ± 4.2 ^{ab}	0.041
MAPK8	35.6 ± 2.5 ^a	15.1 ± 1.9 ^b	15.7 ± 2.0 ^b	14.0 ± 1.0 ^b	< 0.0001
MAPK9	16.9 ± 0.9 ^a	26.7 ± 2.8 ^{ab}	29.8 ± 6.4 ^{ab}	33.5 ± 2.9 ^b	0.028
JUN	33.4 ± 4.5 ^a	191.8 ± 49.0 ^b	152.0 ± 20.6 ^b	68.9 ± 11.4 ^b	0.0005
FOS	57.6 ± 25.8	98.9 ± 59.3	69.5 ± 34.7	17.8 ± 6.0	0.452
IRF5	0.6 ± 0.1 ^a	9.7 ± 1.4 ^b	5.9 ± 2.4 ^a	17.1 ± 2.6 ^b	< 0.0001
IRF7	11.7 ± 1.1 ^a	72.7 ± 9.8 ^b	53.1 ± 11.1 ^b	19.5 ± 3.1 ^a	< 0.0001
SPP1	13.4 ± 3.7	60.3 ± 50.3	524.2 ± 267.1	6.8 ± 1.4	0.037
TRAF3	7.5 ± 0.5 ^a	4.9 ± 0.6 ^b	6.4 ± 0.7 ^{ab}	4.4 ± 0.2 ^b	0.002
IKBKE	0.9 ± 0.1 ^a	18.4 ± 4.5 ^b	9.1 ± 2.2 ^a	8.1 ± 0.6 ^a	0.0003
TBK1	7.2 ± 0.7 ^a	9.9 ± 0.8 ^{ab}	10.8 ± 1.1 ^b	12.2 ± 0.6 ^b	0.002
IRF3	44.0 ± 5.7	69.0 ± 14.7	82.6 ± 14.1	51.3 ± 5.5	0.062
STAT1	47.4 ± 5.1	57.9 ± 4.6	62.0 ± 10.5	49.9 ± 3.7	0.375
TNF	0.5 ± 0.1	0.3 ± 0.1	0.4 ± 0.2	0.1 ± 0.1	0.252
IL1B	0.2 ± 0.1 ^a	1.1 ± 0.3 ^b	0.9 ± 0.2 ^{ab}	0.4 ± 0.1 ^{ab}	0.016
IL6	0.1 ± 0.03	0.2 ± 0.1	0.3 ± 0.1	0.3 ± 0.05	0.089
IL12A	0.5 ± 0.1	0.3 ± 0.1	0.4 ± 0.1	0.3 ± 0.1	0.299
IL12B	0.1 ± 0.04	0.1 ± 0.1	0.05 ± 0.02	0.007 ± 0.007	0.183
CCL3	0.4 ± 0.1	1.6 ± 0.6	0.6 ± 0.2	0.5 ± 0.2	0.058
CCL4	0.6 ± 0.2 ^a	4.5 ± 1.0 ^b	3.2 ± 0.7 ^{ab}	2.4 ± 0.7 ^{ab}	0.005
CCL5	2.0 ± 0.3 ^a	25.9 ± 10.1 ^b	16.1 ± 4.1 ^{ab}	12.3 ± 1.7 ^{ab}	0.025
CD40	4.1 ± 0.5 ^a	5.8 ± 1.2 ^{ab}	8.2 ± 1.1 ^b	4.3 ± 0.6 ^a	0.009
CD80	0.6 ± 0.04 ^a	1.3 ± 0.2 ^b	1.2 ± 0.1 ^b	0.6 ± 0.1 ^a	0.002
CD86	0.2 ± 0.04 ^a	0.9 ± 0.2 ^{ab}	1.6 ± 0.4 ^b	0.5 ± 0.1 ^a	0.002
IFNA1	0.9 ± 0.3 ^a	0.01 ± 0.01 ^b	0 ± 0 ^b	0 ± 0 ^b	0.001
CXCL10	1.6 ± 0.3 ^a	13.1 ± 3.8 ^b	6.6 ± 1.4 ^{ab}	5.2 ± 0.8 ^a	0.003
CXCL11	0.2 ± 0.05 ^a	1.1 ± 0.5 ^{ab}	0.4 ± 0.3 ^{ab}	1.6 ± 0.4 ^b	0.018

^{a-c}Within a row, means without a common superscript differed ($p < 0.05$)