

Supplemental materials

Supplemental Figures

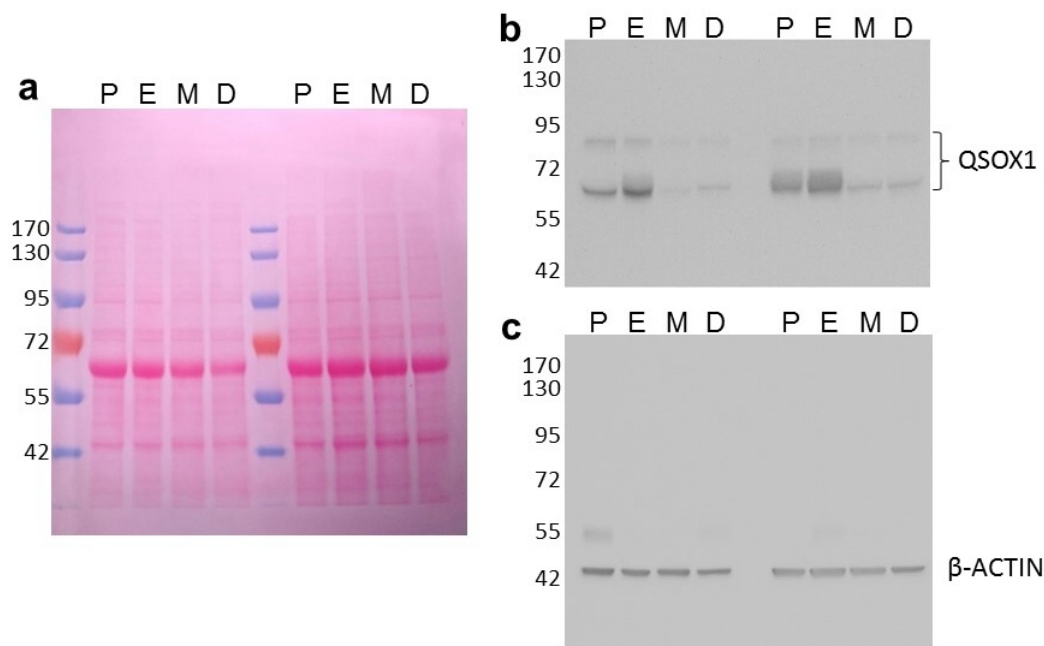


Figure S1. Western blotting detected two forms of QSOX1 in the cycling uterus. (a) Two batches of uterus homogenates were resolved on a 12% SDS-PAGE gel and electrotransferred onto a nitrocellulose membrane. The membrane was stained with Ponceau S to examine protein transfer efficiency. The membrane was then immunoblotted with anti-QSOX1 antiserum (b) or monoclonal anti-β-ACTIN (c). Here are the original blots. Abbreviations: P, proestrus; E, estrus; M, metestrus, D, diestrus.

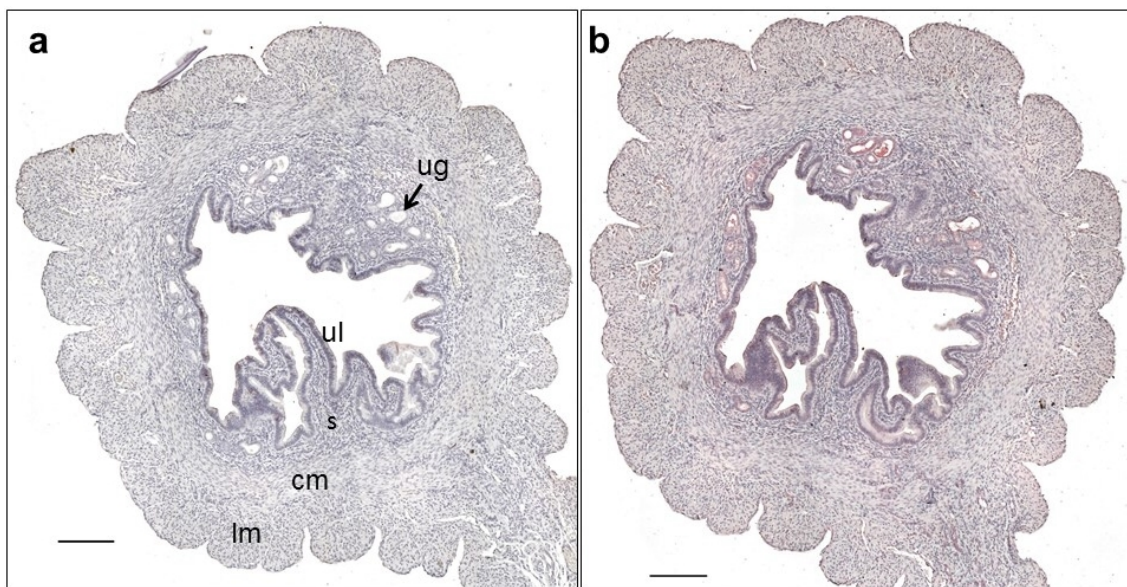


Figure S2. Immunohistochemical staining of QSOX1 in the non-pregnant uterus. (a) The control section without treating with anti-QSOX1 antiserum showed nearly no staining signal. (b) The section was immunostained with anti-QSOX1 antiserum. Scale bar = 200 μm. Abbreviations: cm, circular muscle; lm, longitudinal muscle; s, stroma; ug, uterine glands; ul, uterine lumen.

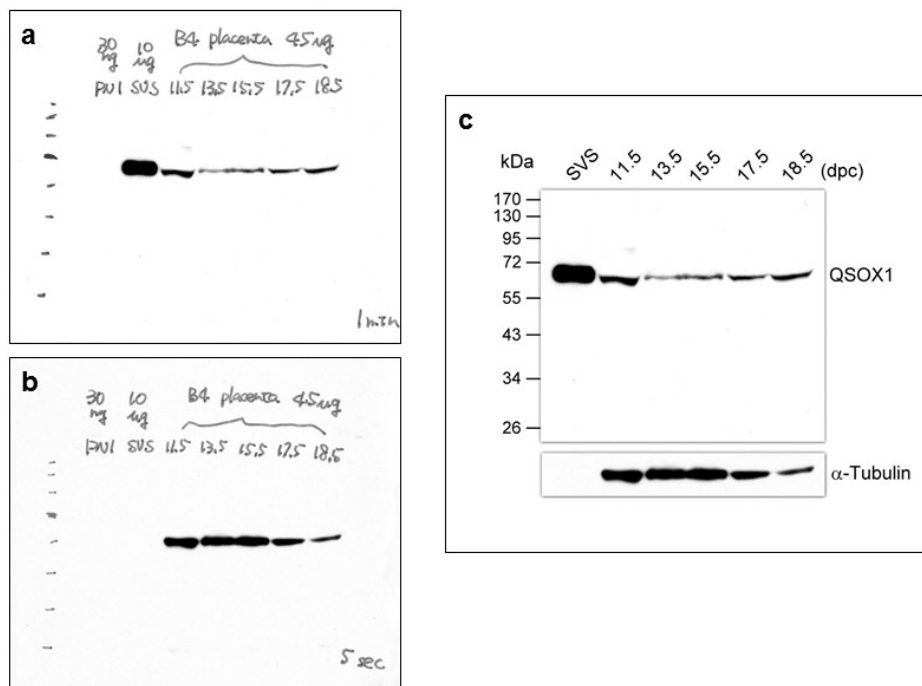


Figure S3. Western blotting detected a 65-kDa form of QSOX1 in the placenta. Placenta homogenates (45 μ g) and seminal vesicle secretion (10 μ g; working as QSOX1 positive control) were resolved on a 12% SDS-PAGE gel and then electrotransferred onto a nitrocellulose membrane. The blot was immunostained with anti-QSOX1 antiserum (a) or monoclonal anti- α -Tubulin (b). Raw data are shown in (a) and (b). The combined data with annotations and molecular weight marker are shown in (c).

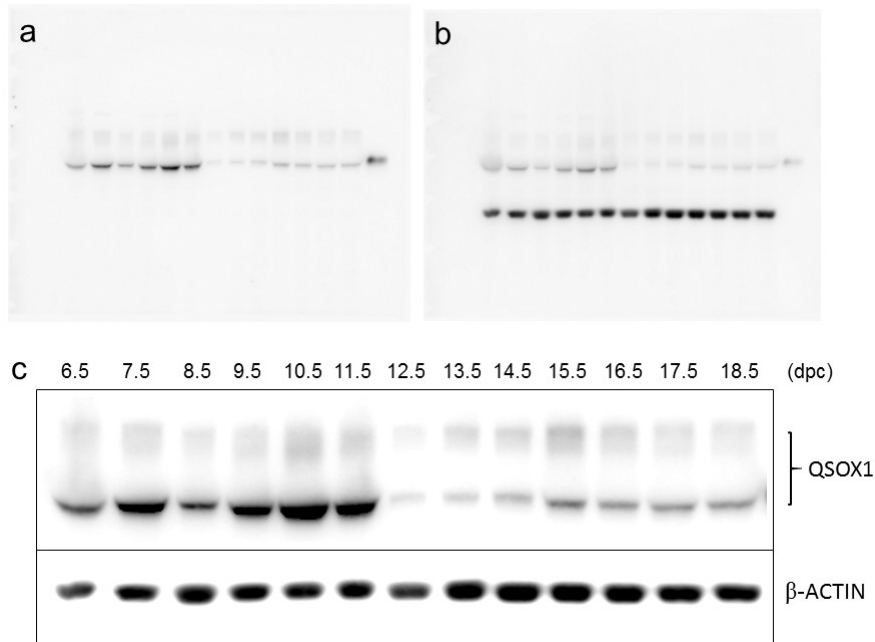


Figure S4. Western blotting detected two forms of QSOX1 in the mouse embryo. Embryo homogenates (50 μ g) and seminal vesicle secretion (5 μ g; working as QSOX1 positive control) were resolved on a 12% SDS-PAGE gel and then electrotransferred onto a nitrocellulose membrane. The blot was immunostained with anti-QSOX1 antiserum (a) or monoclonal anti- β -actin (b). The blot was first immunostained with anti-QSOX1 antiserum; then, the membrane was treated with stripping buffer (0.2 M glycine, pH 2.2) to remove the bound antibody. The blot was then immunostained with monoclonal anti- β -actin antibody (b). It may be that the removal is not clean, and the two signals exist on one blot simultaneously (b). The combined data with annotations are shown in (c).

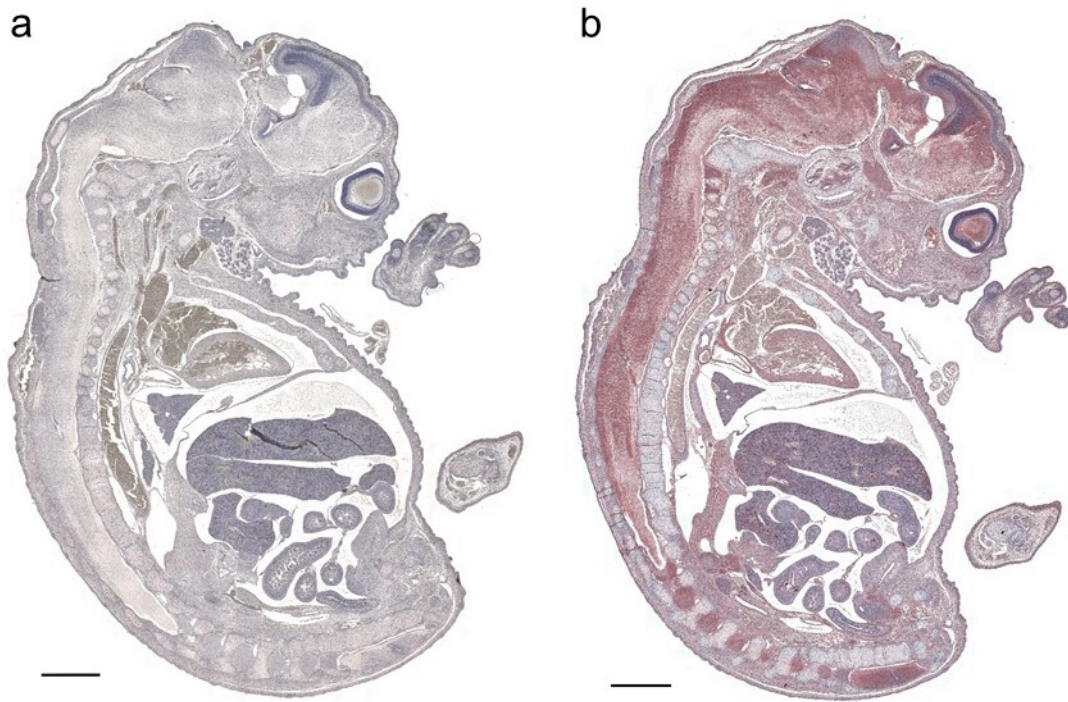


Figure S5. Expression of QSOX1 in various embryonic tissues at 15.5 dpc. (a) The control staining without anti-QSOX1 antiserum. (b) The section was immunostained with anti-QSOX1 antiserum. Scale bar = 1 mm.

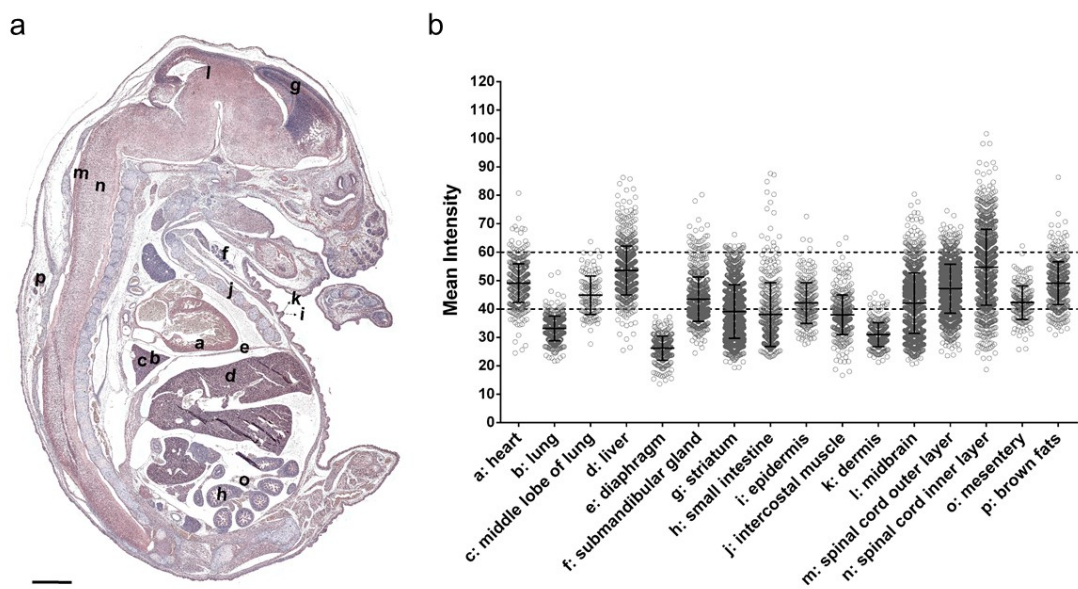


Figure S6. The expression level of QSOX1 in various embryonic tissues at 17.5 dpc. (a) A representative image of QSOX1 distribution in the 17.5 dpc embryo. The marks (a to p) indicate the tissues subjected to quantify and their locations. (b) The scatter plot shows the mean intensity of QSOX1 in cells of each tissue; every small circle indicates the expression intensity of QSOX1 in a single cell.

Table S1. Statistical comparison on expression levels among embryonic tissues at 11.5 dpc.

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff	Significant?	Summary
a: heart vs. b: lung	13.25	11.12 to 15.37	Yes	****
a: heart vs. c: Intercostal muscle	2.015	-0.1449 to 4.174	No	ns
a: heart vs. d: spinal cord inner layer	-20.11	-22.17 to -18.05	Yes	****
a: heart vs. e: spinal cord outer layer	-27.88	-29.88 to -25.88	Yes	****
a: heart vs. f: diaphragm	-2.58	-4.756 to -0.4038	Yes	**
a: heart vs. g: liver	8.833	6.654 to 11.01	Yes	****
a: heart vs. h: submandibular gland	10.64	8.493 to 12.79	Yes	****
a: heart vs. i: neopallial cortex	19.34	17.37 to 21.31	Yes	****
a: heart vs. j: intermediate zone	5.617	3.652 to 7.581	Yes	****
a: heart vs. k: extrinsic ocular muscle	-1.157	-3.260 to 0.9453	No	ns
a: heart vs. l: lens	-16.37	-18.50 to -14.23	Yes	****
a: heart vs. m: inner layer of retina	7.926	5.634 to 10.22	Yes	****
a: heart vs. n: spine	-2.112	-4.571 to 0.3470	No	ns
a: heart vs. o: midbrain	-30.48	-32.47 to -28.48	Yes	****
a: heart vs. p: pons	-9.495	-11.41 to -7.577	Yes	****
a: heart vs. q: medulla oblongata	-22.48	-24.46 to -20.50	Yes	****
a: heart vs. r: small intestine	12.33	10.31 to 14.35	Yes	****
a: heart vs. s: epidermis	-6.692	-9.045 to -4.340	Yes	****
a: heart vs. t: dermis	15.48	13.22 to 17.73	Yes	****
a: heart vs. u: hair follicle	16.56	13.46 to 19.66	Yes	****
a: heart vs. v: pancreas	11.95	9.638 to 14.25	Yes	****
b: lung vs. c: Intercostal muscle	-11.23	-13.33 to -9.133	Yes	****
b: lung vs. d: spinal cord inner layer	-33.35	-35.35 to -31.36	Yes	****
b: lung vs. e: spinal cord outer layer	-41.12	-43.05 to -39.19	Yes	****
b: lung vs. f: diaphragm	-15.83	-17.94 to -13.71	Yes	****
b: lung vs. g: liver	-4.412	-6.531 to -2.294	Yes	****
b: lung vs. h: submandibular gland	-2.606	-4.690 to -0.5217	Yes	**
b: lung vs. i: neopallial cortex	6.097	4.195 to 8.000	Yes	****
b: lung vs. j: intermediate zone	-7.628	-9.525 to -5.732	Yes	****
b: lung vs. k: extrinsic ocular muscle	-14.4	-16.44 to -12.36	Yes	****
b: lung vs. l: lens	-29.61	-31.69 to -27.54	Yes	****
b: lung vs. m: inner layer of retina	-5.32	-7.554 to -3.085	Yes	****
b: lung vs. n: spine	-15.36	-17.76 to -12.95	Yes	****
b: lung vs. o: midbrain	-43.72	-45.65 to -41.79	Yes	****
b: lung vs. p: pons	-22.74	-24.59 to -20.89	Yes	****
b: lung vs. q: medulla oblongata	-35.73	-37.64 to -33.82	Yes	****
b: lung vs. r: small intestine	-0.9191	-2.874 to 1.036	No	ns
b: lung vs. s: epidermis	-19.94	-22.23 to -17.64	Yes	****
b: lung vs. t: dermis	2.232	0.03682 to 4.427	Yes	*
b: lung vs. u: hair follicle	3.313	0.2549 to 6.371	Yes	*
b: lung vs. v: pancreas	-1.299	-3.549 to 0.9515	No	ns
c: Intercostal muscle vs. d: spinal cord inner layer	-22.12	-24.16 to -20.09	Yes	****
c: Intercostal muscle vs. e: spinal cord outer layer	-29.89	-31.87 to -27.92	Yes	****
c: Intercostal muscle vs. f: diaphragm	-4.595	-6.747 to -2.442	Yes	****
c: Intercostal muscle vs. g: liver	6.818	4.662 to 8.975	Yes	****
c: Intercostal muscle vs. h: submandibular gland	8.625	6.502 to 10.75	Yes	****
c: Intercostal muscle vs. i: neopallial cortex	17.33	15.38 to 19.27	Yes	****
c: Intercostal muscle vs. j: intermediate zone	3.602	1.664 to 5.541	Yes	****
c: Intercostal muscle vs. k: extrinsic ocular muscle	-3.172	-5.251 to -1.093	Yes	****
c: Intercostal muscle vs. l: lens	-18.38	-20.49 to -16.27	Yes	****
c: Intercostal muscle vs. m: inner layer of retina	5.911	3.641 to 8.181	Yes	****
c: Intercostal muscle vs. n: spine	-4.126	-6.565 to -1.688	Yes	****
c: Intercostal muscle vs. o: midbrain	-32.49	-34.46 to -30.52	Yes	****
c: Intercostal muscle vs. p: pons	-11.51	-13.40 to -9.618	Yes	****
c: Intercostal muscle vs. q: medulla oblongata	-24.5	-26.45 to -22.54	Yes	****
c: Intercostal muscle vs. r: small intestine	10.31	8.316 to 12.31	Yes	****
c: Intercostal muscle vs. s: epidermis	-8.707	-11.04 to -6.376	Yes	****
c: Intercostal muscle vs. t: dermis	13.46	11.23 to 15.69	Yes	****
c: Intercostal muscle vs. u: hair follicle	14.54	11.46 to 17.63	Yes	****
c: Intercostal muscle vs. v: pancreas	9.932	7.646 to 12.22	Yes	****
d: spinal cord inner layer vs. e: spinal cord outer layer	-7.766	-9.631 to -5.902	Yes	****
d: spinal cord inner layer vs. f: diaphragm	17.53	15.48 to 19.58	Yes	****
d: spinal cord inner layer vs. g: liver	28.94	26.89 to 31.00	Yes	****
d: spinal cord inner layer vs. h: submandibular gland	30.75	28.73 to 32.77	Yes	****
d: spinal cord inner layer vs. i: neopallial cortex	39.45	37.62 to 41.28	Yes	****
d: spinal cord inner layer vs. j: intermediate zone	25.73	23.90 to 27.55	Yes	****
d: spinal cord inner layer vs. k: extrinsic ocular muscle	18.95	16.98 to 20.93	Yes	****
d: spinal cord inner layer vs. l: lens	3.743	1.733 to 5.753	Yes	****

d: spinal cord inner layer vs. m: inner layer of retina	28.03	25.86 to 30.21	Yes	****
d: spinal cord inner layer vs. n: spine	18	15.65 to 20.35	Yes	****
d: spinal cord inner layer vs. o: midbrain	-10.37	-12.23 to -8.508	Yes	****
d: spinal cord inner layer vs. p: pons	10.61	8.838 to 12.39	Yes	****
d: spinal cord inner layer vs. q: medulla oblongata	-2.374	-4.215 to -0.5321	Yes	***
d: spinal cord inner layer vs. r: small intestine	32.44	30.55 to 34.32	Yes	****
d: spinal cord inner layer vs. s: epidermis	13.42	11.18 to 15.65	Yes	****
d: spinal cord inner layer vs. t: dermis	35.59	33.45 to 37.72	Yes	****
d: spinal cord inner layer vs. u: hair follicle	36.67	33.65 to 39.68	Yes	****
d: spinal cord inner layer vs. v: pancreas	32.06	29.86 to 34.25	Yes	****
e: spinal cord outer layer vs. f: diaphragm	25.3	23.30 to 27.29	Yes	****
e: spinal cord outer layer vs. g: liver	36.71	34.71 to 38.71	Yes	****
e: spinal cord outer layer vs. h: submandibular gland	38.51	36.55 to 40.48	Yes	****
e: spinal cord outer layer vs. i: neopallial cortex	47.22	45.45 to 48.98	Yes	****
e: spinal cord outer layer vs. j: intermediate zone	33.49	31.73 to 35.25	Yes	****
e: spinal cord outer layer vs. k: extrinsic ocular muscle	26.72	24.81 to 28.63	Yes	****
e: spinal cord outer layer vs. l: lens	11.51	9.560 to 13.46	Yes	****
e: spinal cord outer layer vs. m: inner layer of retina	35.8	33.68 to 37.92	Yes	****
e: spinal cord outer layer vs. n: spine	25.76	23.46 to 28.06	Yes	****
e: spinal cord outer layer vs. o: midbrain	-2.601	-4.395 to -0.8065	Yes	****
e: spinal cord outer layer vs. p: pons	18.38	16.67 to 20.09	Yes	****
e: spinal cord outer layer vs. q: medulla oblongata	5.393	3.617 to 7.168	Yes	****
e: spinal cord outer layer vs. r: small intestine	40.2	38.38 to 42.02	Yes	****
e: spinal cord outer layer vs. s: epidermis	21.18	19.00 to 23.37	Yes	****
e: spinal cord outer layer vs. t: dermis	43.35	41.27 to 45.43	Yes	****
e: spinal cord outer layer vs. u: hair follicle	44.43	41.46 to 47.41	Yes	****
e: spinal cord outer layer vs. v: pancreas	39.82	37.69 to 41.96	Yes	****
f: diaphragm vs. g: liver	11.41	9.240 to 13.59	Yes	****
f: diaphragm vs. h: submandibular gland	13.22	11.08 to 15.36	Yes	****
f: diaphragm vs. i: neopallial cortex	21.92	19.96 to 23.89	Yes	****
f: diaphragm vs. j: intermediate zone	8.197	6.239 to 10.15	Yes	****
f: diaphragm vs. k: extrinsic ocular muscle	1.423	-0.6736 to 3.519	No	ns
f: diaphragm vs. l: lens	-13.79	-15.92 to -11.66	Yes	****
f: diaphragm vs. m: inner layer of retina	10.51	8.220 to 12.79	Yes	****
f: diaphragm vs. n: spine	0.4681	-1.985 to 2.921	No	ns
f: diaphragm vs. o: midbrain	-27.9	-29.89 to -25.91	Yes	****
f: diaphragm vs. p: pons	-6.915	-8.826 to -5.004	Yes	****
f: diaphragm vs. q: medulla oblongata	-19.9	-21.87 to -17.93	Yes	****
f: diaphragm vs. r: small intestine	14.91	12.89 to 16.92	Yes	****
f: diaphragm vs. s: epidermis	-4.112	-6.459 to -1.766	Yes	****
f: diaphragm vs. t: dermis	18.06	15.81 to 20.31	Yes	****
f: diaphragm vs. u: hair follicle	19.14	16.04 to 22.23	Yes	****
f: diaphragm vs. v: pancreas	14.53	12.22 to 16.83	Yes	****
g: liver vs. h: submandibular gland	1.806	-0.3367 to 3.949	No	ns
g: liver vs. i: neopallial cortex	10.51	8.543 to 12.48	Yes	****
g: liver vs. j: intermediate zone	-3.216	-5.177 to -1.255	Yes	****
g: liver vs. k: extrinsic ocular muscle	-9.99	-12.09 to -7.891	Yes	****
g: liver vs. l: lens	-25.2	-27.33 to -23.07	Yes	****
g: liver vs. m: inner layer of retina	-0.9072	-3.196 to 1.382	No	ns
g: liver vs. n: spine	-10.94	-13.40 to -8.489	Yes	****
g: liver vs. o: midbrain	-39.31	-41.30 to -37.32	Yes	****
g: liver vs. p: pons	-18.33	-20.24 to -16.41	Yes	****
g: liver vs. q: medulla oblongata	-31.32	-33.29 to -29.34	Yes	****
g: liver vs. r: small intestine	3.493	1.476 to 5.511	Yes	****
g: liver vs. s: epidermis	-15.53	-17.87 to -13.18	Yes	****
g: liver vs. t: dermis	6.644	4.393 to 8.896	Yes	****
g: liver vs. u: hair follicle	7.725	4.627 to 10.82	Yes	****
g: liver vs. v: pancreas	3.113	0.8085 to 5.418	Yes	***
h: submandibular gland vs. i: neopallial cortex	8.703	6.773 to 10.63	Yes	****
h: submandibular gland vs. j: intermediate zone	-5.022	-6.947 to -3.098	Yes	****
h: submandibular gland vs. k: extrinsic ocular muscle	-11.8	-13.86 to -9.732	Yes	****
h: submandibular gland vs. l: lens	-27.01	-29.10 to -24.91	Yes	****
h: submandibular gland vs. m: inner layer of retina	-2.714	-4.971 to -0.4560	Yes	**
h: submandibular gland vs. n: spine	-12.75	-15.18 to -10.32	Yes	****
h: submandibular gland vs. o: midbrain	-41.12	-43.07 to -39.16	Yes	****
h: submandibular gland vs. p: pons	-20.13	-22.01 to -18.26	Yes	****
h: submandibular gland vs. q: medulla oblongata	-33.12	-35.06 to -31.18	Yes	****
h: submandibular gland vs. r: small intestine	1.687	-0.2944 to 3.668	No	ns
h: submandibular gland vs. s: epidermis	-17.33	-19.65 to -15.01	Yes	****
h: submandibular gland vs. t: dermis	4.838	2.619 to 7.057	Yes	****
h: submandibular gland vs. u: hair follicle	5.919	2.844 to 8.994	Yes	****
h: submandibular gland vs. v: pancreas	1.307	-0.9666 to 3.581	No	ns
i: neopallial cortex vs. j: intermediate zone	-13.73	-15.45 to -12.00	Yes	****

i: neopallial cortex vs. k: extrinsic ocular muscle	-20.5	-22.38 to -18.62	Yes	****
i: neopallial cortex vs. l: lens	-35.71	-37.63 to -33.79	Yes	****
i: neopallial cortex vs. m: inner layer of retina	-11.42	-13.51 to -9.326	Yes	****
i: neopallial cortex vs. n: spine	-21.45	-23.73 to -19.18	Yes	****
i: neopallial cortex vs. o: midbrain	-49.82	-51.58 to -48.06	Yes	****
i: neopallial cortex vs. p: pons	-28.84	-30.51 to -27.16	Yes	****
i: neopallial cortex vs. q: medulla oblongata	-41.83	-43.57 to -40.08	Yes	****
i: neopallial cortex vs. r: small intestine	-7.016	-8.805 to -5.227	Yes	****
i: neopallial cortex vs. s: epidermis	-26.04	-28.19 to -23.88	Yes	****
i: neopallial cortex vs. t: dermis	-3.865	-5.914 to -1.816	Yes	****
i: neopallial cortex vs. u: hair follicle	-2.785	-5.739 to 0.1701	No	ns
i: neopallial cortex vs. v: pancreas	-7.396	-9.504 to -5.288	Yes	****
j: intermediate zone vs. k: extrinsic ocular muscle	-6.774	-8.650 to -4.899	Yes	****
j: intermediate zone vs. l: lens	-21.98	-23.90 to -20.07	Yes	****
j: intermediate zone vs. m: inner layer of retina	2.309	0.2233 to 4.394	Yes	*
j: intermediate zone vs. n: spine	-7.729	-9.996 to -5.461	Yes	****
j: intermediate zone vs. o: midbrain	-36.09	-37.85 to -34.34	Yes	****
j: intermediate zone vs. p: pons	-15.11	-16.78 to -13.45	Yes	****
j: intermediate zone vs. q: medulla oblongata	-28.1	-29.84 to -26.36	Yes	****
j: intermediate zone vs. r: small intestine	6.709	4.926 to 8.492	Yes	****
j: intermediate zone vs. s: epidermis	-12.31	-14.46 to -10.16	Yes	****
j: intermediate zone vs. t: dermis	9.86	7.817 to 11.90	Yes	****
j: intermediate zone vs. u: hair follicle	10.94	7.990 to 13.89	Yes	****
j: intermediate zone vs. v: pancreas	6.329	4.226 to 8.432	Yes	****
k: extrinsic ocular muscle vs. l: lens	-15.21	-17.26 to -13.15	Yes	****
k: extrinsic ocular muscle vs. m: inner layer of retina	9.083	6.867 to 11.30	Yes	****
k: extrinsic ocular muscle vs. n: spine	-0.9545	-3.343 to 1.434	No	ns
k: extrinsic ocular muscle vs. o: midbrain	-29.32	-31.23 to -27.41	Yes	****
k: extrinsic ocular muscle vs. p: pons	-8.337	-10.16 to -6.511	Yes	****
k: extrinsic ocular muscle vs. q: medulla oblongata	-21.33	-23.22 to -19.44	Yes	****
k: extrinsic ocular muscle vs. r: small intestine	13.48	11.55 to 15.42	Yes	****
k: extrinsic ocular muscle vs. s: epidermis	-5.535	-7.813 to -3.257	Yes	****
k: extrinsic ocular muscle vs. t: dermis	16.63	14.46 to 18.81	Yes	****
k: extrinsic ocular muscle vs. u: hair follicle	17.72	14.67 to 20.76	Yes	****
k: extrinsic ocular muscle vs. v: pancreas	13.1	10.87 to 15.34	Yes	****
l: lens vs. m: inner layer of retina	24.29	22.04 to 26.54	Yes	****
l: lens vs. n: spine	14.25	11.84 to 16.67	Yes	****
l: lens vs. o: midbrain	-14.11	-16.06 to -12.17	Yes	****
l: lens vs. p: pons	6.871	5.005 to 8.737	Yes	****
l: lens vs. q: medulla oblongata	-6.117	-8.045 to -4.189	Yes	****
l: lens vs. r: small intestine	28.69	26.72 to 30.66	Yes	****
l: lens vs. s: epidermis	9.674	7.364 to 11.98	Yes	****
l: lens vs. t: dermis	31.84	29.63 to 34.05	Yes	****
l: lens vs. u: hair follicle	32.92	29.86 to 35.99	Yes	****
l: lens vs. v: pancreas	28.31	26.05 to 30.58	Yes	****
m: inner layer of retina vs. n: spine	-10.04	-12.59 to -7.481	Yes	****
m: inner layer of retina vs. o: midbrain	-38.4	-40.52 to -36.29	Yes	****
m: inner layer of retina vs. p: pons	-17.42	-19.46 to -15.38	Yes	****
m: inner layer of retina vs. q: medulla oblongata	-30.41	-32.51 to -28.31	Yes	****
m: inner layer of retina vs. r: small intestine	4.401	2.262 to 6.539	Yes	****
m: inner layer of retina vs. s: epidermis	-14.62	-17.07 to -12.16	Yes	****
m: inner layer of retina vs. t: dermis	7.552	5.191 to 9.912	Yes	****
m: inner layer of retina vs. u: hair follicle	8.632	5.454 to 11.81	Yes	****
m: inner layer of retina vs. v: pancreas	4.021	1.609 to 6.432	Yes	****
n: spine vs. o: midbrain	-28.36	-30.66 to -26.07	Yes	****
n: spine vs. p: pons	-7.383	-9.611 to -5.155	Yes	****
n: spine vs. q: medulla oblongata	-20.37	-22.65 to -18.09	Yes	****
n: spine vs. r: small intestine	14.44	12.12 to 16.75	Yes	****
n: spine vs. s: epidermis	-4.581	-7.191 to -1.970	Yes	****
n: spine vs. t: dermis	17.59	15.07 to 20.11	Yes	****
n: spine vs. u: hair follicle	18.67	15.37 to 21.97	Yes	****
n: spine vs. v: pancreas	14.06	11.49 to 16.63	Yes	****
o: midbrain vs. p: pons	20.98	19.28 to 22.68	Yes	****
o: midbrain vs. q: medulla oblongata	7.994	6.223 to 9.764	Yes	****
o: midbrain vs. r: small intestine	42.8	40.99 to 44.62	Yes	****
o: midbrain vs. s: epidermis	23.78	21.60 to 25.96	Yes	****
o: midbrain vs. t: dermis	45.95	43.88 to 48.03	Yes	****
o: midbrain vs. u: hair follicle	47.03	44.06 to 50.01	Yes	****
o: midbrain vs. v: pancreas	42.42	40.29 to 44.55	Yes	****
p: pons vs. q: medulla oblongata	-12.99	-14.67 to -11.31	Yes	****
p: pons vs. r: small intestine	21.82	20.09 to 23.55	Yes	****
p: pons vs. s: epidermis	2.802	0.6933 to 4.912	Yes	***
p: pons vs. t: dermis	24.97	22.97 to 26.97	Yes	****

p: pons vs. u: hair follicle	26.05	23.13 to 28.97	Yes	****
p: pons vs. v: pancreas	21.44	19.38 to 23.50	Yes	****
q: medulla oblongata vs. r: small intestine	34.81	33.01 to 36.61	Yes	****
q: medulla oblongata vs. s: epidermis	15.79	13.63 to 17.95	Yes	****
q: medulla oblongata vs. t: dermis	37.96	35.90 to 40.02	Yes	****
q: medulla oblongata vs. u: hair follicle	39.04	36.08 to 42.00	Yes	****
q: medulla oblongata vs. v: pancreas	34.43	32.31 to 36.55	Yes	****
r: small intestine vs. s: epidermis	-19.02	-21.22 to -16.82	Yes	****
r: small intestine vs. t: dermis	3.151	1.053 to 5.249	Yes	****
r: small intestine vs. u: hair follicle	4.232	1.243 to 7.220	Yes	****
r: small intestine vs. v: pancreas	-0.3799	-2.535 to 1.776	No	ns
s: epidermis vs. t: dermis	22.17	19.75 to 24.59	Yes	****
s: epidermis vs. u: hair follicle	23.25	20.03 to 26.47	Yes	****
s: epidermis vs. v: pancreas	18.64	16.17 to 21.11	Yes	****
t: dermis vs. u: hair follicle	1.081	-2.071 to 4.232	No	ns
t: dermis vs. v: pancreas	-3.531	-5.907 to -1.155	Yes	****
u: hair follicle vs. v: pancreas	-4.612	-7.802 to -1.422	Yes	****

Table S2. Statistical comparison on expression levels among embryonic tissues at 17.5 dpc.

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary
a: outside edge of tongue vs. b: tooth	-31.23	-32.75 to -29.70	Yes	****
a: outside edge of tongue vs. c: tongue	-19.48	-21.01 to -17.95	Yes	****
a: outside edge of tongue vs. d: spinal cord outer layer	-25.31	-26.80 to -23.82	Yes	****
a: outside edge of tongue vs. e: spinal cord inner layer	-7.35	-9.352 to -5.348	Yes	****
a: outside edge of tongue vs. f: ganglion	-24.79	-26.68 to -22.89	Yes	****
a: outside edge of tongue vs. g: submandibular gland	-3.715	-5.116 to -2.314	Yes	****
a: outside edge of tongue vs. h: mesometrial gland	-5.551	-8.121 to -2.982	Yes	****
a: outside edge of tongue vs. i: junction zone	-33	-34.89 to -31.12	Yes	****
a: outside edge of tongue vs. j: labyrinth	-17.12	-18.41 to -15.83	Yes	****
a: outside edge of tongue vs. k: yolk sac	-7.772	-9.200 to -6.344	Yes	****
a: outside edge of tongue vs. l: follicles of vibrissae	-12.14	-13.57 to -10.72	Yes	****
a: outside edge of tongue vs. m: epidermis	-19.28	-20.72 to -17.84	Yes	****
a: outside edge of tongue vs. n: dermis	-5.04	-6.589 to -3.490	Yes	****
a: outside edge of tongue vs. o: vomeronasal organ	-19.17	-20.68 to -17.66	Yes	****
a: outside edge of tongue vs. p: thoracic vertebrae	-13.05	-14.83 to -11.27	Yes	****
a: outside edge of tongue vs. q: thymus	-24.35	-26.35 to -22.36	Yes	****
b: tooth vs. c: tongue	11.75	10.05 to 13.44	Yes	****
b: tooth vs. d: spinal cord outer layer	5.914	4.255 to 7.574	Yes	****
b: tooth vs. e: spinal cord inner layer	23.88	21.75 to 26.01	Yes	****
b: tooth vs. f: ganglion	6.442	4.414 to 8.471	Yes	****
b: tooth vs. g: submandibular gland	27.51	25.93 to 29.09	Yes	****
b: tooth vs. h: mesometrial gland	25.68	23.01 to 28.35	Yes	****
b: tooth vs. i: junction zone	-1.776	-3.800 to 0.2481	No	ns
b: tooth vs. j: labyrinth	14.11	12.63 to 15.59	Yes	****
b: tooth vs. k: yolk sac	23.46	21.85 to 25.06	Yes	****
b: tooth vs. l: follicles of vibrissae	19.09	17.49 to 20.69	Yes	****
b: tooth vs. m: epidermis	11.95	10.33 to 13.56	Yes	****
b: tooth vs. n: dermis	26.19	24.48 to 27.90	Yes	****
b: tooth vs. o: vomeronasal organ	12.06	10.38 to 13.74	Yes	****
b: tooth vs. p: thoracic vertebrae	18.18	16.25 to 20.10	Yes	****
b: tooth vs. q: thymus	6.875	4.752 to 8.998	Yes	****
c: tongue vs. d: spinal cord outer layer	-5.834	-7.499 to -4.168	Yes	****
c: tongue vs. e: spinal cord inner layer	12.13	9.994 to 14.27	Yes	****
c: tongue vs. f: ganglion	-5.306	-7.340 to -3.271	Yes	****
c: tongue vs. g: submandibular gland	15.76	14.18 to 17.35	Yes	****
c: tongue vs. h: mesometrial gland	13.93	11.25 to 16.60	Yes	****
c: tongue vs. i: junction zone	-13.52	-15.55 to -11.49	Yes	****
c: tongue vs. j: labyrinth	2.364	0.8747 to 3.853	Yes	****
c: tongue vs. k: yolk sac	11.71	10.10 to 13.32	Yes	****
c: tongue vs. l: follicles of vibrissae	7.339	5.731 to 8.947	Yes	****
c: tongue vs. m: epidermis	0.1984	-1.420 to 1.817	No	ns
c: tongue vs. n: dermis	14.44	12.72 to 16.16	Yes	****
c: tongue vs. o: vomeronasal organ	0.3089	-1.376 to 1.994	No	ns
c: tongue vs. p: thoracic vertebrae	6.428	4.501 to 8.356	Yes	****
c: tongue vs. q: thymus	-4.873	-7.001 to -2.745	Yes	****
d: spinal cord outer layer vs. e: spinal cord inner layer	17.96	15.86 to 20.07	Yes	****
d: spinal cord outer layer vs. f: ganglion	0.528	-1.475 to 2.531	No	ns
d: spinal cord outer layer vs. g: submandibular gland	21.6	20.05 to 23.14	Yes	****
d: spinal cord outer layer vs. h: mesometrial gland	19.76	17.11 to 22.41	Yes	****

d: spinal cord outer layer vs. i: junction zone	-7.69	-9.688 to -5.693	Yes	****
d: spinal cord outer layer vs. j: labyrinth	8.197	6.751 to 9.643	Yes	****
d: spinal cord outer layer vs. k: yolk sac	17.54	15.97 to 19.11	Yes	****
d: spinal cord outer layer vs. l: follicles of vibrissae	13.17	11.60 to 14.74	Yes	****
d: spinal cord outer layer vs. m: epidermis	6.032	4.453 to 7.611	Yes	****
d: spinal cord outer layer vs. n: dermis	20.27	18.59 to 21.96	Yes	****
d: spinal cord outer layer vs. o: vomeronasal organ	6.143	4.495 to 7.790	Yes	****
d: spinal cord outer layer vs. p: thoracic vertebrae	12.26	10.37 to 14.16	Yes	****
d: spinal cord outer layer vs. q: thymus	0.9604	-1.137 to 3.058	No	ns
e: spinal cord inner layer vs. f: ganglion	-17.44	-19.84 to -15.03	Yes	****
e: spinal cord inner layer vs. g: submandibular gland	3.635	1.591 to 5.680	Yes	****
e: spinal cord inner layer vs. h: mesometrial gland	1.799	-1.171 to 4.769	No	ns
e: spinal cord inner layer vs. i: junction zone	-25.65	-28.06 to -23.25	Yes	****
e: spinal cord inner layer vs. j: labyrinth	-9.766	-11.74 to -7.796	Yes	****
e: spinal cord inner layer vs. k: yolk sac	-0.422	-2.485 to 1.641	No	ns
e: spinal cord inner layer vs. l: follicles of vibrissae	-4.791	-6.852 to -2.730	Yes	****
e: spinal cord inner layer vs. m: epidermis	-11.93	-14.00 to -9.862	Yes	****
e: spinal cord inner layer vs. n: dermis	2.31	0.1611 to 4.459	Yes	*
e: spinal cord inner layer vs. o: vomeronasal organ	-11.82	-13.94 to -9.699	Yes	****
e: spinal cord inner layer vs. p: thoracic vertebrae	-5.701	-8.020 to -3.383	Yes	****
e: spinal cord inner layer vs. q: thymus	-17	-19.49 to -14.52	Yes	****
f: ganglion vs. g: submandibular gland	21.07	19.13 to 23.01	Yes	****
f: ganglion vs. h: mesometrial gland	19.23	16.34 to 22.13	Yes	****
f: ganglion vs. i: junction zone	-8.218	-10.53 to -5.904	Yes	****
f: ganglion vs. j: labyrinth	7.669	5.811 to 9.528	Yes	****
f: ganglion vs. k: yolk sac	17.01	15.06 to 18.97	Yes	****
f: ganglion vs. l: follicles of vibrissae	12.64	10.69 to 14.60	Yes	****
f: ganglion vs. m: epidermis	5.504	3.540 to 7.468	Yes	****
f: ganglion vs. n: dermis	19.75	17.70 to 21.79	Yes	****
f: ganglion vs. o: vomeronasal organ	5.615	3.595 to 7.634	Yes	****
f: ganglion vs. p: thoracic vertebrae	11.73	9.509 to 13.96	Yes	****
f: ganglion vs. q: thymus	0.4324	-1.969 to 2.833	No	ns
g: submandibular gland vs. h: mesometrial gland	-1.836	-4.439 to 0.7665	No	ns
g: submandibular gland vs. i: junction zone	-29.29	-31.22 to -27.36	Yes	****
g: submandibular gland vs. j: labyrinth	-13.4	-14.76 to -12.05	Yes	****
g: submandibular gland vs. k: yolk sac	-4.057	-5.544 to -2.570	Yes	****
g: submandibular gland vs. l: follicles of vibrissae	-8.426	-9.910 to -6.942	Yes	****
g: submandibular gland vs. m: epidermis	-15.57	-17.06 to -14.07	Yes	****
g: submandibular gland vs. n: dermis	-1.325	-2.929 to 0.2792	No	ns
g: submandibular gland vs. o: vomeronasal organ	-15.46	-17.02 to -13.89	Yes	****
g: submandibular gland vs. p: thoracic vertebrae	-9.336	-11.16 to -7.512	Yes	****
g: submandibular gland vs. q: thymus	-20.64	-22.67 to -18.60	Yes	****
h: mesometrial gland vs. i: junction zone	-27.45	-30.35 to -24.56	Yes	****
h: mesometrial gland vs. j: labyrinth	-11.56	-14.11 to -9.020	Yes	****
h: mesometrial gland vs. k: yolk sac	-2.221	-4.838 to 0.3967	No	ns
h: mesometrial gland vs. l: follicles of vibrissae	-6.59	-9.206 to -3.974	Yes	****
h: mesometrial gland vs. m: epidermis	-13.73	-16.35 to -11.11	Yes	****
h: mesometrial gland vs. n: dermis	0.5115	-2.174 to 3.197	No	ns
h: mesometrial gland vs. o: vomeronasal organ	-13.62	-16.28 to -10.96	Yes	****
h: mesometrial gland vs. p: thoracic vertebrae	-7.5	-10.32 to -4.677	Yes	****
h: mesometrial gland vs. q: thymus	-18.8	-21.77 to -15.84	Yes	****
i: junction zone vs. j: labyrinth	15.89	14.03 to 17.74	Yes	****
i: junction zone vs. k: yolk sac	25.23	23.28 to 27.18	Yes	****
i: junction zone vs. l: follicles of vibrissae	20.86	18.91 to 22.81	Yes	****
i: junction zone vs. m: epidermis	13.72	11.76 to 15.68	Yes	****
i: junction zone vs. n: dermis	27.96	25.92 to 30.01	Yes	****
i: junction zone vs. o: vomeronasal organ	13.83	11.82 to 15.85	Yes	****
i: junction zone vs. p: thoracic vertebrae	19.95	17.73 to 22.17	Yes	****
i: junction zone vs. q: thymus	8.651	6.254 to 11.05	Yes	****
j: labyrinth vs. k: yolk sac	9.344	7.962 to 10.73	Yes	****
j: labyrinth vs. l: follicles of vibrissae	4.975	3.596 to 6.354	Yes	****
j: labyrinth vs. m: epidermis	-2.165	-3.557 to -0.7734	Yes	****
j: labyrinth vs. n: dermis	12.08	10.57 to 13.58	Yes	****
j: labyrinth vs. o: vomeronasal organ	-2.055	-3.523 to -0.5862	Yes	****
j: labyrinth vs. p: thoracic vertebrae	4.065	2.324 to 5.806	Yes	****
j: labyrinth vs. q: thymus	-7.237	-9.198 to -5.276	Yes	****
k: yolk sac vs. l: follicles of vibrissae	-4.369	-5.879 to -2.859	Yes	****
k: yolk sac vs. m: epidermis	-11.51	-13.03 to -9.988	Yes	****
k: yolk sac vs. n: dermis	2.732	1.104 to 4.360	Yes	****
k: yolk sac vs. o: vomeronasal organ	-11.4	-12.99 to -9.807	Yes	****
k: yolk sac vs. p: thoracic vertebrae	-5.279	-7.125 to -3.433	Yes	****
k: yolk sac vs. q: thymus	-16.58	-18.64 to -14.53	Yes	****
l: follicles of vibrissae vs. m: epidermis	-7.141	-8.659 to -5.622	Yes	****

l: follicles of vibrissae vs. n: dermis	7.101	5.476 to 8.726	Yes	****
l: follicles of vibrissae vs. o: vomeronasal organ	-7.03	-8.619 to -5.441	Yes	****
l: follicles of vibrissae vs. p: thoracic vertebrae	-0.9105	-2.754 to 0.9331	No	ns
l: follicles of vibrissae vs. q: thymus	-12.21	-14.26 to -10.16	Yes	****
m: epidermis vs. n: dermis	14.24	12.61 to 15.88	Yes	****
m: epidermis vs. o: vomeronasal organ	0.1106	-1.489 to 1.711	No	ns
m: epidermis vs. p: thoracic vertebrae	6.23	4.377 to 8.083	Yes	****
m: epidermis vs. q: thymus	-5.072	-7.133 to -3.011	Yes	****
n: dermis vs. o: vomeronasal organ	-14.13	-15.83 to -12.43	Yes	****
n: dermis vs. p: thoracic vertebrae	-8.012	-9.953 to -6.070	Yes	****
n: dermis vs. q: thymus	-19.31	-21.45 to -17.17	Yes	****
o: vomeronasal organ vs. p: thoracic vertebrae	6.119	4.208 to 8.031	Yes	****
o: vomeronasal organ vs. q: thymus	-5.182	-7.296 to -3.069	Yes	****
p: thoracic vertebrae vs. q: thymus	-11.3	-13.61 to -8.991	Yes	****