

S6 Table. Differential expression of *Hox* genes in pairwise tissue comparisons.

| Gene | <i>Psip1</i> KO vs. ++/+g log₂ fold change | <i>P</i> value | Double KO vs. ++/+g (log₂ fold change) | <i>P</i> value |
|---------------|--|-----------------------|--|-----------------------|
| <i>Hoxa1</i> | n.d. | n.a. | n.d. | n.a. |
| <i>Hoxa2</i> | 0.72 | 0.25 | 0.32 | 0.62 |
| <i>Hoxa3</i> | 0.57 | 0.30 | 0.63 | 0.26 |
| <i>Hoxa4</i> | 0.38 | 0.50 | 0.39 | 0.50 |
| <i>Hoxa5</i> | 0.84 | 0.10 | 0.52 | 0.32 |
| <i>Hoxa6</i> | n.d. | n.a. | 0.12 | 0.45 |
| <i>Hoxa7</i> | 0.90 | 0.08 | 0.99 | 0.06 |
| <i>Hoxa9</i> | 1.15 | 0.06 | 1.09 | 0.04 |
| <i>Hoxa10</i> | 0.80 | 0.10 | 0.79 | 0.12 |
| <i>Hoxa11</i> | 1.40 | 0.06 | 1.40 | 0.07 |
| <i>Hoxa13</i> | 0.19 | 0.70 | 0.35 | 0.50 |
| <i>Hoxb3</i> | 4.08 | 2.2×10 ⁻⁹ | 3.04 | 9.0×10 ⁻⁶ |
| <i>Hoxb4</i> | 1.88 | 6.9×10 ⁻⁴ | 0.23 | 0.65 |
| <i>Hoxb5</i> | 2.65 | 8.3×10 ⁻⁶ | 2.07 | 4.8×10 ⁻⁴ |
| <i>Hoxb6</i> | 2.86 | 4.1×10 ⁻⁷ | 2.18 | 8.5×10 ⁻⁵ |
| <i>Hoxb7</i> | 2.27 | 4.6×10 ⁻⁵ | 2.71 | 1.4×10 ⁻⁶ |
| <i>Hoxb8</i> | 3.60 | 8.1×10 ⁻¹⁰ | 2.75 | 1.6×10 ⁻⁶ |
| <i>Hoxb9</i> | 3.07 | 2.1×10 ⁻⁸ | 2.34 | 1.1×10 ⁻⁵ |
| <i>Hoxb13</i> | 8.29 | 9.1×10 ⁻¹³ | 8.55 | 9.7×10 ⁻¹⁴ |
| <i>Hoxc6</i> | 2.37 | 1.4×10 ⁻⁵ | 0.29 | 0.57 |
| <i>Hoxc8</i> | 2.46 | 7.2×10 ⁻⁶ | 1.49 | 0.53 |
| <i>Hoxc9</i> | 4.37 | 4.9×10 ⁻¹³ | 2.83 | 8.9×10 ⁻⁷ |
| <i>Hoxd1</i> | n.d. | n.a. | n.d. | n.a. |
| <i>Hoxd3</i> | n.d. | n.a. | n.d. | n.a. |
| <i>Hoxd4</i> | n.d. | n.a. | n.d. | n.a. |
| <i>Hoxd8</i> | 1.29 | 0.012 | 0.83 | 0.10 |
| <i>Hoxd9</i> | 1.48 | 0.005 | 1.50 | 0.004 |
| <i>Hoxd10</i> | 1.30 | 0.01 | 1.60 | 0.002 |
| <i>Hoxd11</i> | 1.40 | 0.005 | 1.60 | 0.002 |
| <i>Hoxd12</i> | 2.60 | 5.0×10 ⁻⁵ | 2.26 | 2.6×10 ⁻⁵ |
| <i>Hoxd13</i> | 0.86 | 0.08 | 1.32 | 0.09 |

KO, knockout; n.d., not detected; n.a., not applicable