

Supplementary Material Table S3.

A. Statistical differences regarding sum of ROH lengths calculated for all ROH in respect to horse breed.

|       | KP | HC                     | AR                    | MLP                    | SOK                    | SZTUM                  |
|-------|----|------------------------|-----------------------|------------------------|------------------------|------------------------|
| KP    | -  | W : 6057<br>P : 0.4898 | W : 3549<br>P <0.0001 | W : 2962<br>P : 0.4814 | W : 8175<br>P <0.0001  | W : 5602<br>P <0.0001  |
| HC    |    | -                      | W : 3651<br>P <0.0001 | W : 3299<br>P : 0.8693 | W : 9241<br>P <0.0001  | W : 6329<br>P <0.0001  |
| AR    |    |                        | -                     | W : 5161<br>P <0.0001  | W : 12639<br>P <0.0001 | W : 8180<br>P <0.0001  |
| MLP   |    |                        |                       | -                      | W : 4463<br>P <0.0001  | W : 3116<br>P <0.0001  |
| SOK   |    |                        |                       |                        | -                      | W : 4536<br>P : 0.0102 |
| SZTUM |    |                        |                       |                        |                        | -                      |

B. Statistical differences regarding sum of ROH lengths calculated for ROH above 4 Mb in respect to horse breed.

|       | KP | HC                     | AR                     | MLP                   | SOK                    | SZTUM                  |
|-------|----|------------------------|------------------------|-----------------------|------------------------|------------------------|
| KP    | -  | W : 6286<br>P : 0.2324 | W : 7348<br>P : 0.0113 | W : 4236<br>P <0.0001 | W : 9441<br>P <0.0001  | W : 6240<br>P <0.0001  |
| HC    |    | -                      | W : 7954<br>P : 0.1567 | W : 4673<br>P <0.0001 | W : 10551<br>P <0.0001 | W : 7057<br>P <0.0001  |
| AR    |    |                        | -                      | W : 4847<br>P <0.0001 | W : 11389<br>P <0.0001 | W : 7698<br>P <0.0001  |
| MLP   |    |                        |                        | -                     | W : 4033<br>P : 0.0002 | W : 2911<br>P <0.0001  |
| SOK   |    |                        |                        |                       | -                      | W : 4747<br>P : 0.0012 |
| SZTUM |    |                        |                        |                       |                        | -                      |

W- linear rank sum

P- pvalue of the test