

**Differences and commonalities in the genetic architecture of protein quantitative trait loci
in European and Arab populations**

Thareja et al.

SUPPLEMENTARY MATERIAL

Supplementary Table 1: QBB discovery

Supplementary Table 2: INTERVAL replication

Supplementary Table 3: KORA replication

Supplementary Table 4: Cross-ethnic colocalization

Supplementary Table 5: Overall PGS performance

Supplementary Table 6: PGS performance by protein

Supplementary Table 7: SOMAscan target annotation

Supplementary Figure 1: Two-dimensional Manhattan plot

Supplementary Figure 2: Scatterplot of effect estimates (beta)

Supplementary Figure 3: Regional association plots

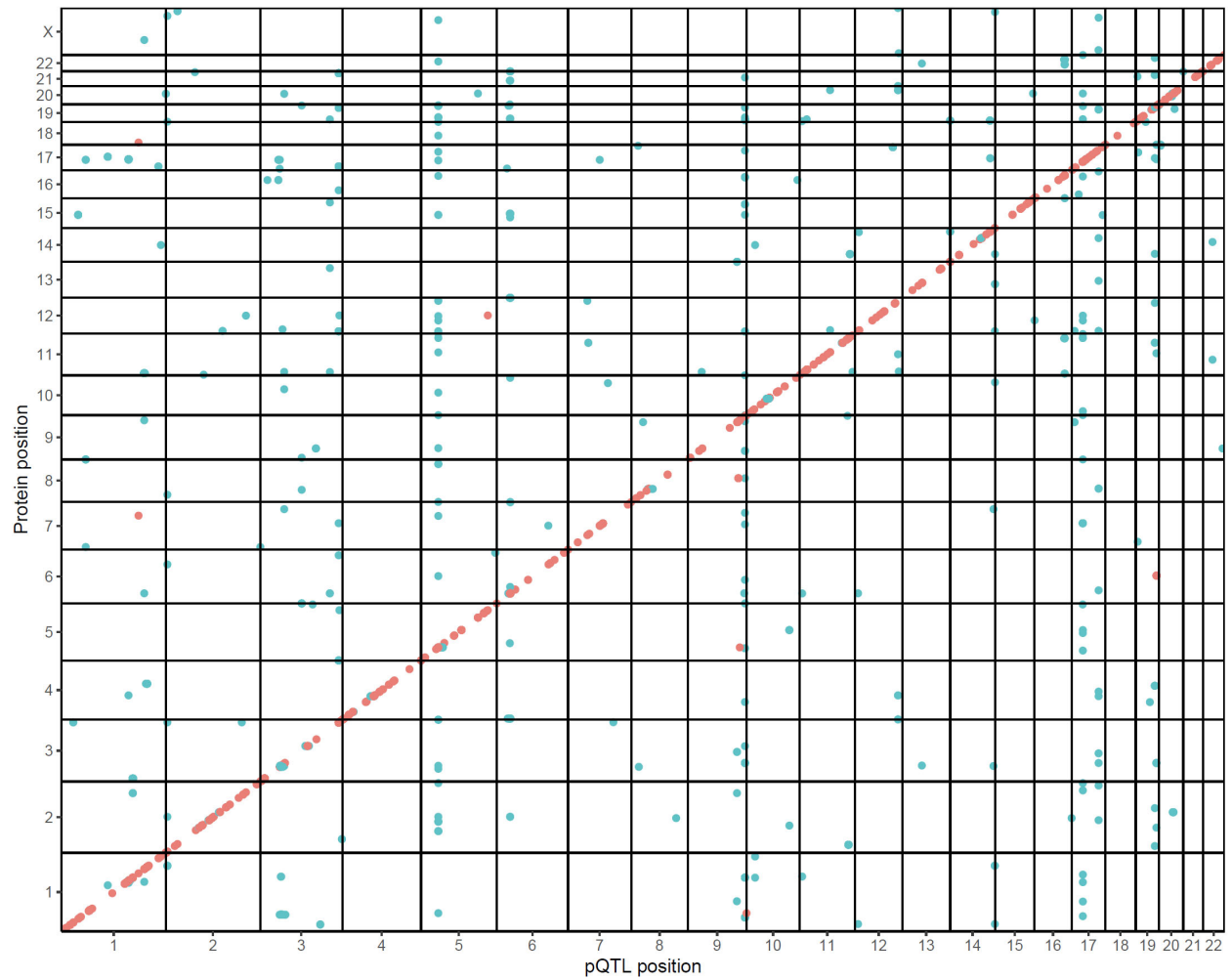
Supplementary Figure 4: Regional cross-ethnic colocalization plots

Links to additional Supplementary Data and Figures

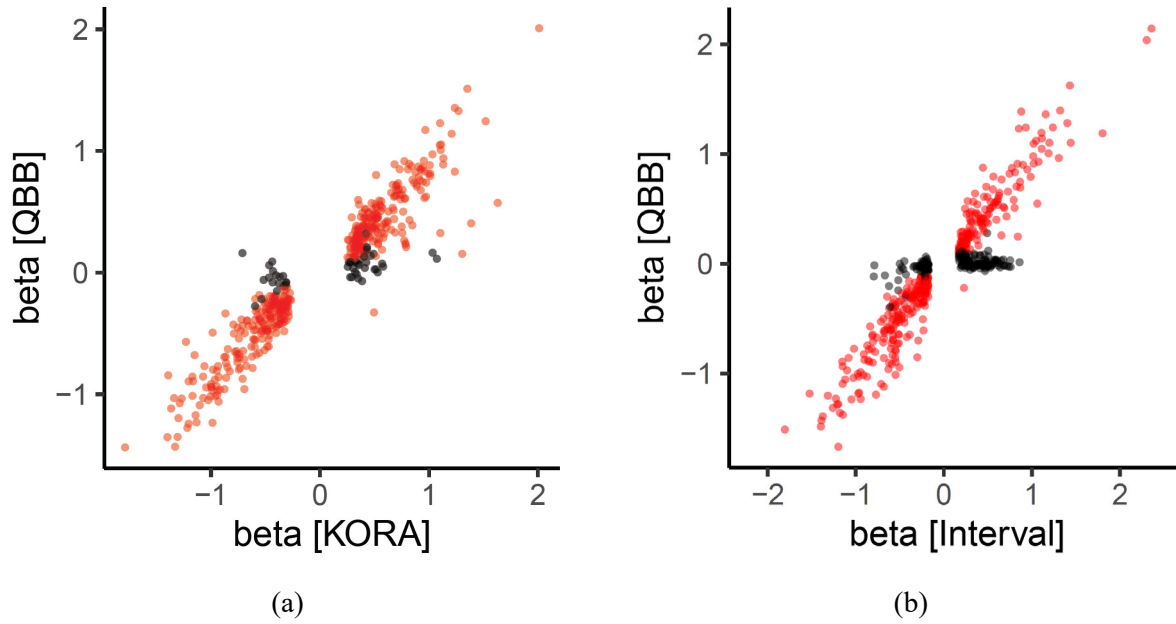
The following Supplementary Data and Figures are too large for submission to the journal are accessible as indicated below.

- Full summary statistics of the QBB GWAS will be deposited with the GWAS catalogue. These data are also available without password protection at <https://wcmq.box.com/s/vkhhqz4z1jjdew5p2xfvi3ta0rww5n30>.
- A complete set of Manhattan and QQ-plots are available on FigShare at this link: <https://doi.org/10.6084/m9.figshare.20518926>
These plots are also available without password protection at <https://wcmq.box.com/s/oc0pmycvmwckv18x5iphdt25bj5zy2lq>
- A complete set of regional association plots are available on FigShare at this link: <https://doi.org/10.6084/m9.figshare.20518926>
These plots are also available without password protection at <https://wcmq.box.com/s/1awbxb6gvjevdy5mmf526al7962pk3o9>
- A complete set of colocalization plots is available on FigShare at this link: <https://doi.org/10.6084/m9.figshare.20518926>
These plots are also available without password protection at <https://wcmq.box.com/s/bpugp0pkcu7xpq98glrzo94e1h3vi3we>

SUPPLEMENTARY FIGURES

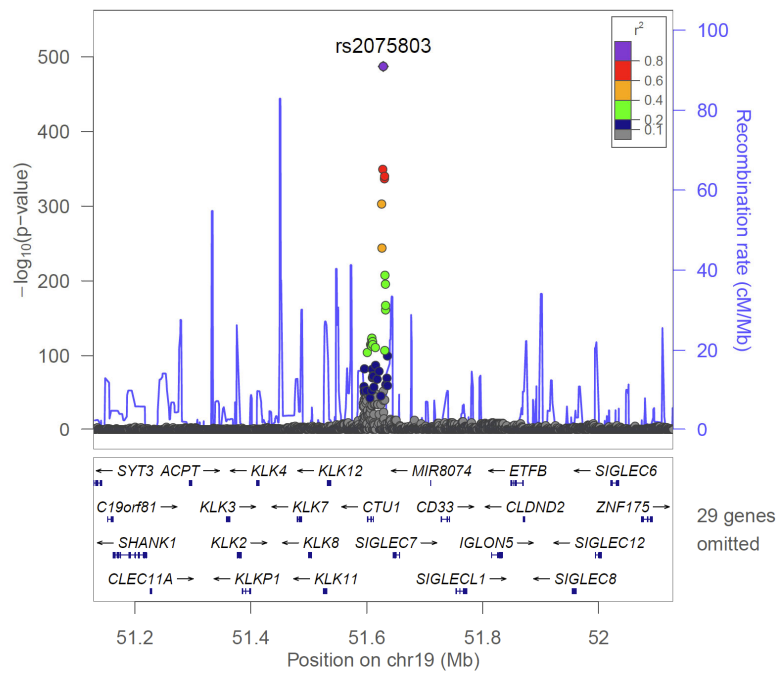


Supplementary Figure 1: Two-dimensional Manhattan plot. Chromosomal positions of *cis*-pQTLs (red) and *trans*-pQTLs (blue); plot data is in **Supplementary Table 1**.



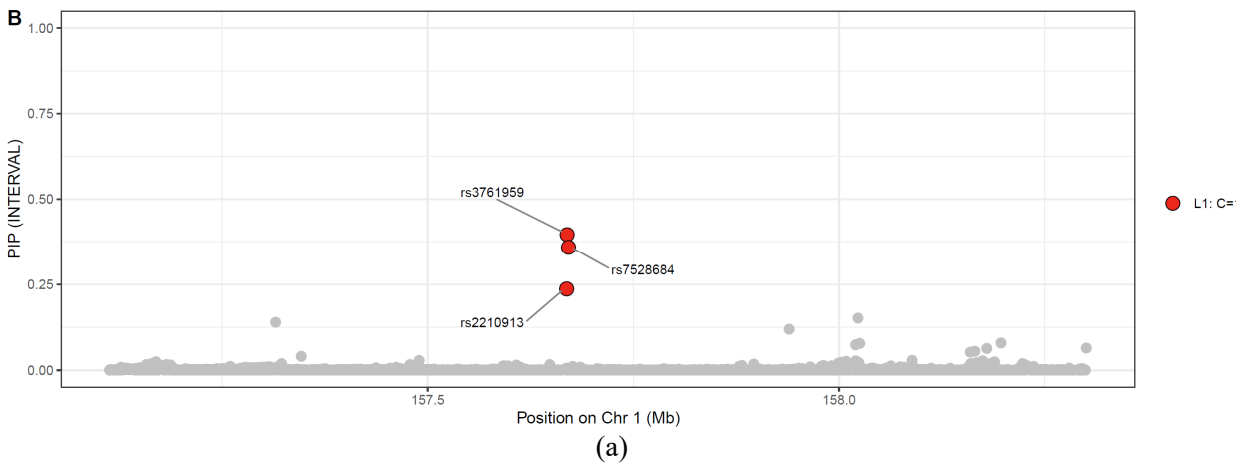
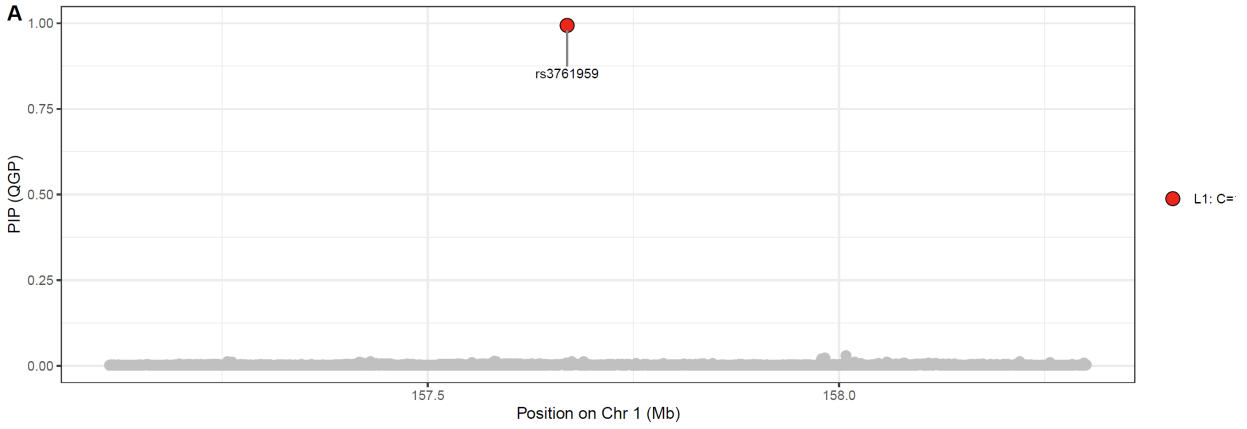
Supplementary Figure 2: Scatterplot of effect estimates (beta). between QBB and KORA (a) and between QBB and INTERVAL (b); replicated pQTLs are colored in red; limited to pQTLs that were replicated on the same variant, directionality matched for effect allele, plot data is in **Supplementary Tables 2&3**.

1 | SIGLEC9 (3007-7_2) |rs2075803

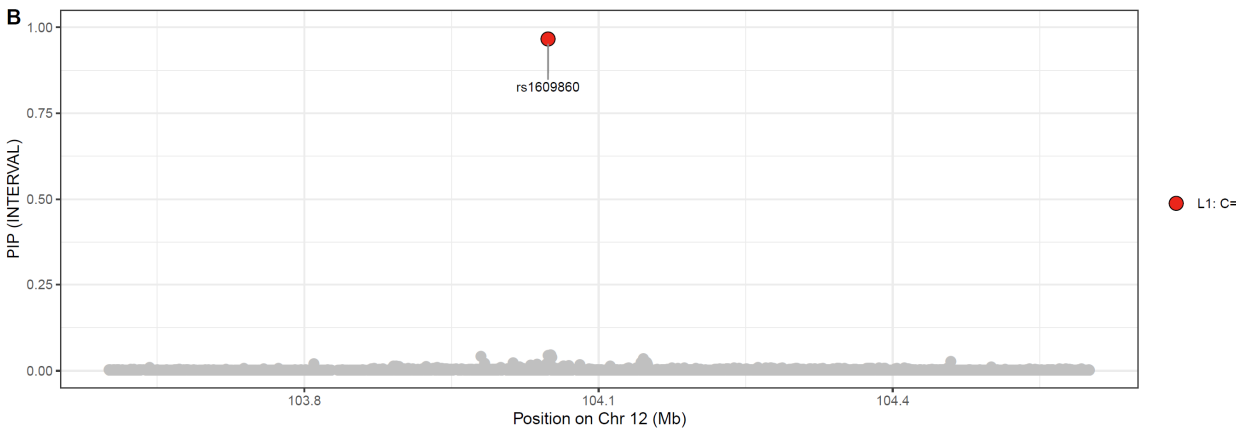
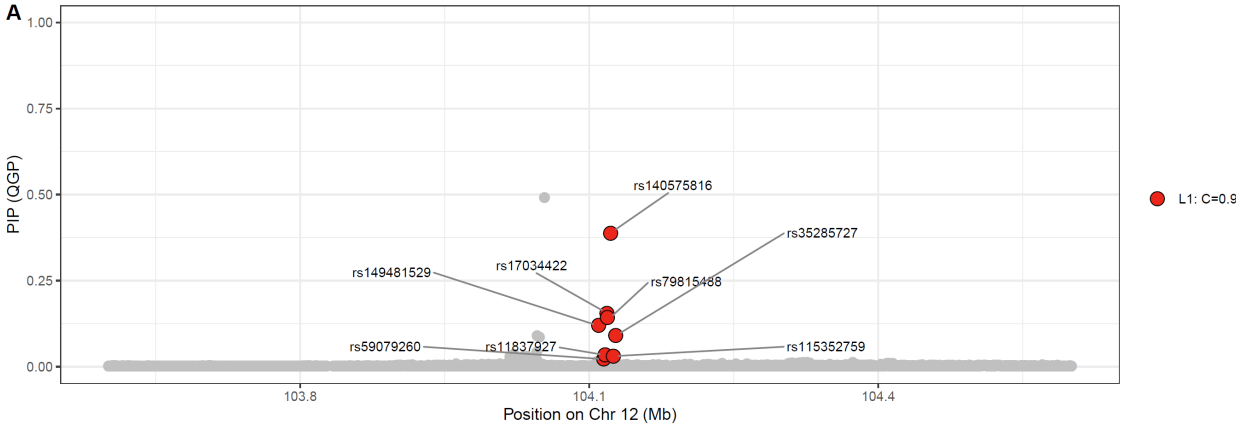


Supplementary Figure 3: Regional association plots. Plots for all 2,678 pQTLs are provided in PDF format, an example is shown here; the full summary statistics of this GWAS that were used to generate these plots are deposited in the GWAS catalogue; pQTLs are numbered and labelled as in **Supplementary Table 1**.

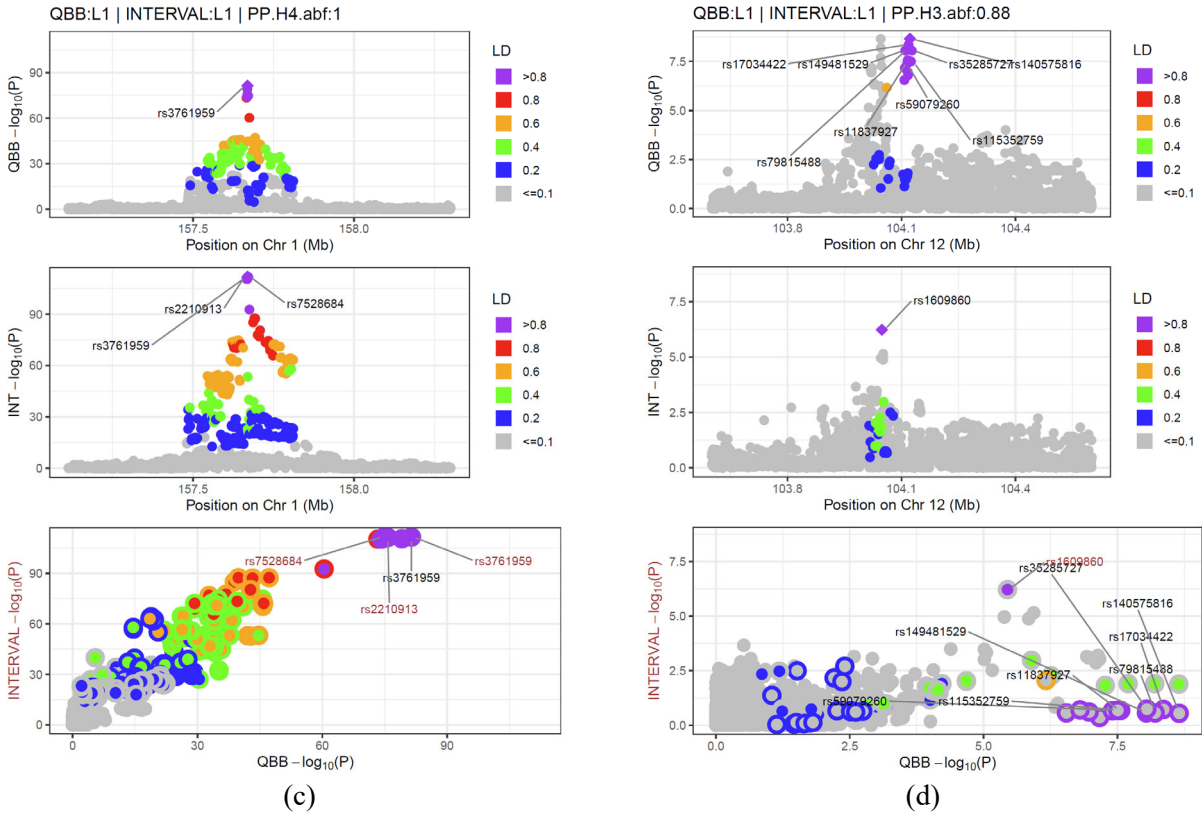
27 | 4440-15_2 | Fc receptor-like protein 3



515 | 3607-71_1 | Dickkopf-related protein 3



(b)



Supplementary Figure 4: Regional cross-ethnic colocalization plots. Example plots for the Fc receptor-like protein 3 (FCRL3) (a&c) and the Dickkopf-related protein 3 (DKK3) (b&d) regions; PIP values for SuSiE credible sets (a,b); regional association plots (c&d, top two rows) and a scatterplot of $-\log_{10}(p\text{-value})$, (c&d, bottom row), circle colors reflect LD with the respective lead variant of the credible set, inner circle fill is for Interval, outer circle color is for QBB; similar plots for all regions are provided in PDF format, summary data for all 771 regions are in **Supplementary Table 4**.

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