Supplementary information

The effect of *Oryza sativa* L. subsp. *japonica* cultivar Yukihikari on the immune system

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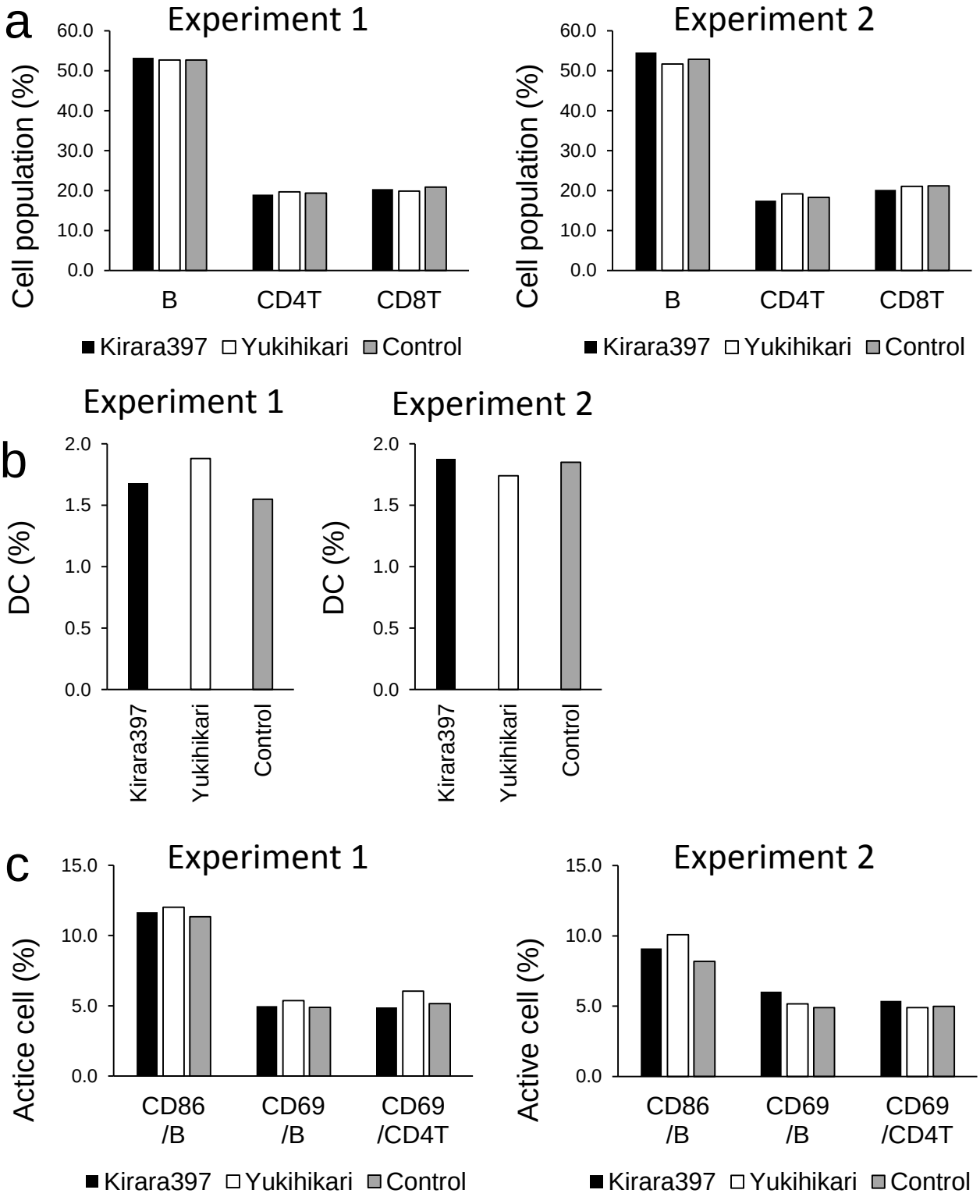
Supplementary figure 1. Effect of Yukihikari and Kirara397 on the proportions of B cells, CD4 T cells, CD8 T cells, DC, and activation markers on B and T cells *in vitro*. Spleen cells of C57BL/6 mice were cultured for 2 d with or without 20-μg rice powder (Yukihikari or Kirara397). **(a)** The ratio of B cells ($B220^+$ cells) and CD4 T cells and CD8 T cells. **(b)** The ratio of DC ($CD11^+$) cells, and **(c)** The ratio of activation marker CD86 on B cells and CD69 on B and T cells. The results of the two experiments are shown.

Supplementary figure 2. DNA microarray analysis of spleen cells treated with Yukihikari and Kirara397. Cells were prepared as shown in Suppl Fig.1 and total RNA was prepared and subjected to DNA microarray analysis. **(a)** Heat maps of expression levels between Yukihikari *versus* control. **(b)** Kirara397 *versus* control. **(c)** Yukihikari *versus* Kirara397. **(d)** The plot of expression levels between Yukihikari *versus* Kirara397, and **(e)** gene numbers significantly up- and down-regulated.

Supplementary figure 3. RNA sequencing analysis of spleen cells treated with Kirara397 and Yukihikari. Total RNA was prepared as shown in Supplementary Fig. 2 and subjected to RNA sequencing analysis. Differential expression volcano plots (Kirara397 *versus* control, Yukihikari *versus* control, and Yukihikari *versus* Kirara397) are shown. Red dots represent genes that are significantly upregulated and blue dots represent those that are significantly down-regulated. X-axis: log2 fold change of gene expression. Y-axis: statistically significant difference of the differential expression in log10 (p-value).



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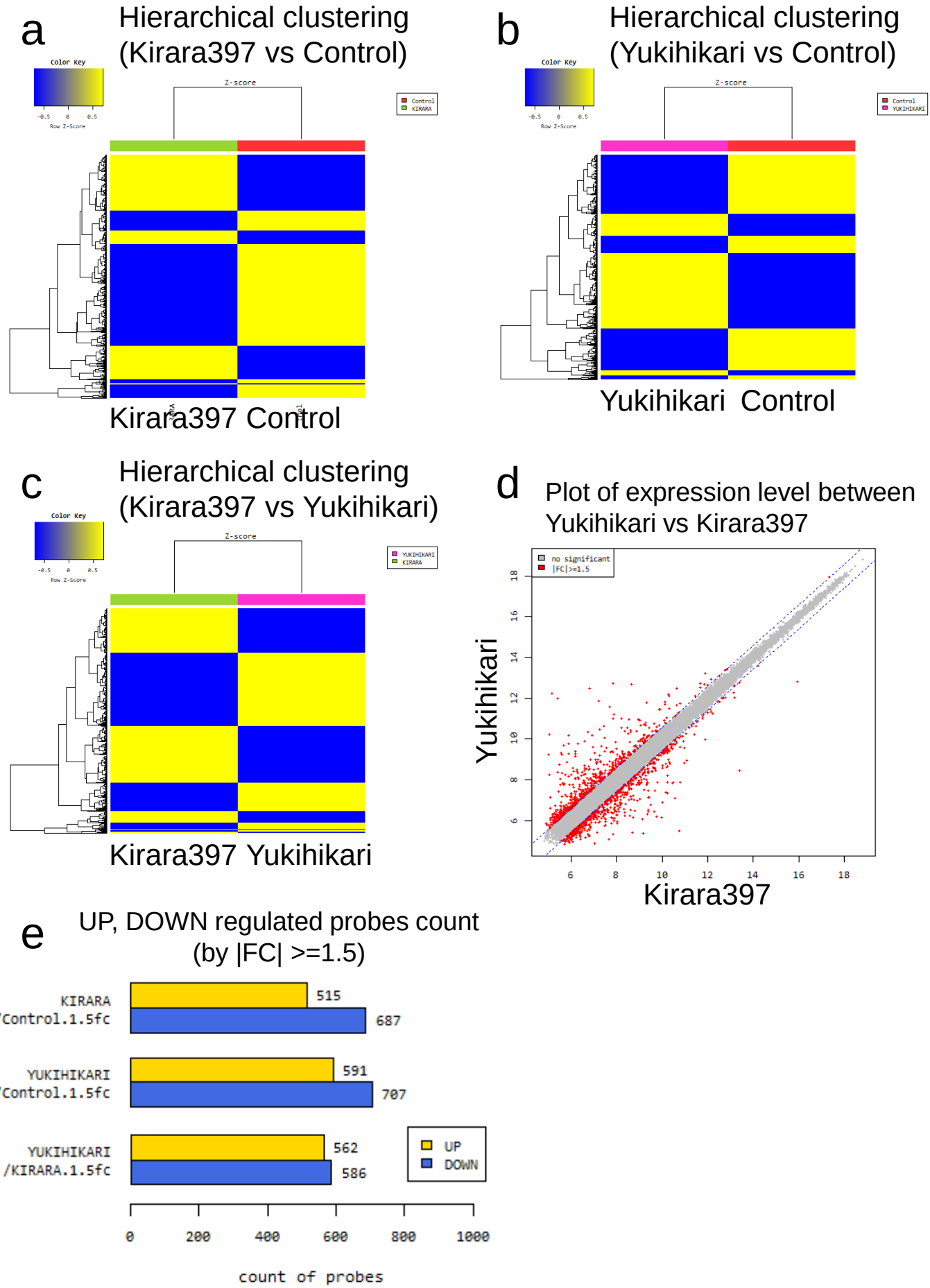

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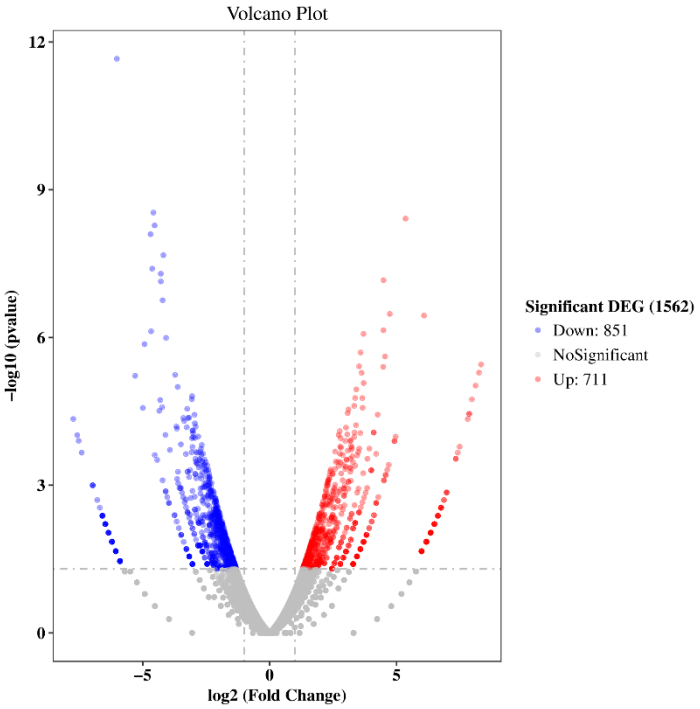
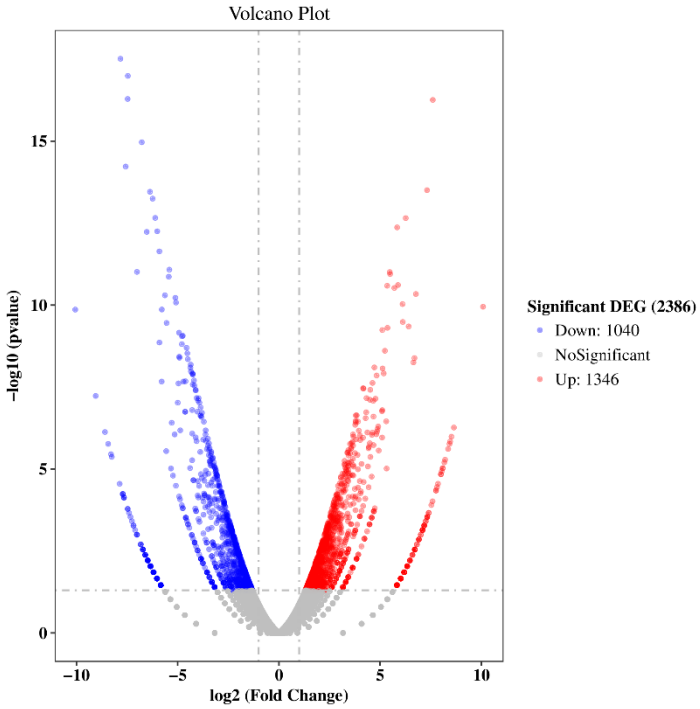
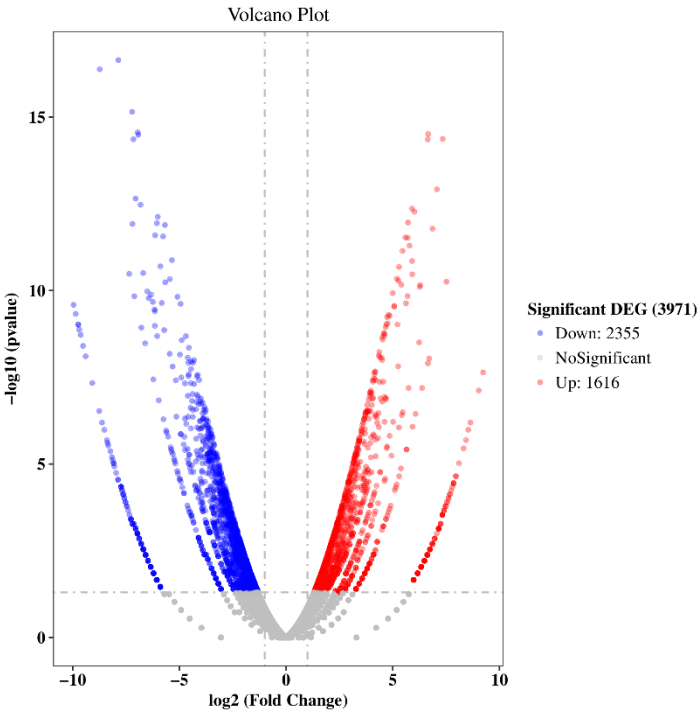
Control vs Kirara397



Control vs Yukihikari



Yukihikari vs Kirara397



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