



Figure S1. Two-dimensional hierarchical clustering heat map of the color parameters, root weight, carotenoid, free sugar and total sweetness index (TSI) in 180 carrot genetic resources. The relative abundance of each parameter is indicated on the color scale, with the figures indicating the difference in fold compared to the overall average. The dendrogram at the top represents the clustering of the studied parameters while the dendrogram on the left represents the clustering of carrot genetic resources (n=180). The colors ranging from blue to red in represent the range from low to high value of individual parameter, respectively. L: lightness; a: redness; b: yellowness; C: chroma, and h: hue angle. Numbers in the right are the serial number of the genetic resources. Refer to the table S1 for detailed information about the genetic resources.