Supplementary information for:

Model selection emphasises the importance of non-chromosomal information in genetic studies

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Table S3: Frequency of predictors ($X_1$, $X_2$ and $X_1 X_2$) within 1000 modelling repeats using LASSO for hierarchical interactions.

<table>
<thead>
<tr>
<th>Gene deletion</th>
<th>$X_1$</th>
<th>$X_2$</th>
<th>$X_1 X_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCM22</td>
<td>57</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>PEP12</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>PEP7</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>PHO88</td>
<td>640</td>
<td>626</td>
<td>467</td>
</tr>
<tr>
<td>SKI8</td>
<td>1000</td>
<td>997</td>
<td>997</td>
</tr>
<tr>
<td>VPS16</td>
<td>1000</td>
<td>874</td>
<td>870</td>
</tr>
<tr>
<td>PHO88(killer)</td>
<td>1000</td>
<td>956</td>
<td>953</td>
</tr>
<tr>
<td>PHO88(non-killer)</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>SKI8(killer)</td>
<td>1000</td>
<td>988</td>
<td>988</td>
</tr>
<tr>
<td>SKI8(non-killer)</td>
<td>998</td>
<td>995</td>
<td>995</td>
</tr>
</tbody>
</table>

Aside from the MCM22 and PHO88(non-killer) gene deletion experiments, all variables ($X_1$, $X_2$ and $X_1 X_2$) are selected in most modelling repeats. An exception is the PHO88 deletion experiment where the interaction predictor ($X_1 X_2$) is selected in only half of the 1000 repeats.