Table S3: pR promoter logic parameter values.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>StdDev</th>
<th>Dimension</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>$B_R$</td>
<td>134.5</td>
<td>–</td>
<td>FL</td>
<td>LoE</td>
</tr>
<tr>
<td>$B_I$</td>
<td>130.2</td>
<td>–</td>
<td>FL</td>
<td>LoE</td>
</tr>
<tr>
<td>$B_Z$</td>
<td>0</td>
<td>–</td>
<td>FL</td>
<td>fixed</td>
</tr>
<tr>
<td>$\theta_R = Q_Z / Q_R$</td>
<td>6.9</td>
<td>–</td>
<td>–</td>
<td>LoE</td>
</tr>
<tr>
<td>$\theta_I = Q_Z / Q_I$</td>
<td>3.01</td>
<td>–</td>
<td>–</td>
<td>LoE</td>
</tr>
<tr>
<td>$Q_Z$</td>
<td>2.52E4</td>
<td>1.4E4</td>
<td>FL</td>
<td>PLF</td>
</tr>
<tr>
<td>$m$</td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>fixed</td>
</tr>
<tr>
<td>$n$</td>
<td>1.45</td>
<td>0.22</td>
<td>–</td>
<td>PLF</td>
</tr>
<tr>
<td>$\beta$</td>
<td>0.0282</td>
<td>9.8E-3</td>
<td>–</td>
<td>PLF</td>
</tr>
<tr>
<td>$\delta$</td>
<td>4.53E-4</td>
<td>2.1E-4</td>
<td>FL$^{-1}$</td>
<td>PLF</td>
</tr>
<tr>
<td>$\tilde{\mu} [\text{Sen}]$</td>
<td>2.76E-4</td>
<td>6.2E-5</td>
<td>OD$^{-1}$ FL$^{-(1+m)/m}$</td>
<td>PLF</td>
</tr>
<tr>
<td>$\rho_{\text{max}} [\text{Sen}]$</td>
<td>0.1</td>
<td>–</td>
<td>OD</td>
<td>fixed</td>
</tr>
<tr>
<td>$\tilde{\mu} [\text{Aut}]$</td>
<td>1.21E-3</td>
<td>–</td>
<td>OD$^{-1}$ FL$^{-(1+m)/m}$</td>
<td>AUT</td>
</tr>
<tr>
<td>$\rho_{\text{max}} [\text{Aut}]$</td>
<td>0.05</td>
<td>–</td>
<td>OD</td>
<td>fixed</td>
</tr>
</tbody>
</table>

Key:

FL: Average per-pixel fluorescence intensity (Fig. 3, images)
OD: Optical density at 600 nm
LoE: Line of equivalence measurements (Fig. S2)
IND: Inducible promoter measurements (Fig. 3A,B)
PLF: Promoter logic function (Figs. 3C and S3)
AUT: Aut-RFB and Aut-IFB measurements (Fig. 5)