Supplementary Information

Direct labeling rolling circle amplification as a straightforward signal amplification technique for biodetection formats

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Exemplary DNA microarray image

Figure S1: Spotting layout (left) and microarray scanner images (right) of the DNA microarray. Negative control: circular template omitted. RCA_15: circular template added.
Reaction solutions

Figure S2: Rolling circle amplification reaction solutions.

For all reactions, 50 µL reaction solution with 10 U φ29 polymerase, 0.3 µM BSA in φ29 buffer were applied. Shown here are the results for Cy3-dUTP. DY-555-dUTP displayed the same order of signals and signal sizes. While reaction solution A and B are equally good, solution A is twice as expensive. Therefore, reaction solution B was used for the experiments presented in the manuscript.

Table S1: Rolling circle amplification reaction solution composition

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<td>dA/G/CTP [mM]</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>dTTP [µM]</td>
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<td>-</td>
<td>2</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>dye-dUTP [µM]</td>
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<td>1</td>
<td>1</td>
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<td>0.1</td>
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