Product Description

Product Code: MPC-48-1-R1-S
Suitable for: switchSENSE® DRX
Storage: Store at 2-8 °C, dry in the dark
Layout: Each spot, nanolever with same sequence and fluorescent dye
Grade: Standard

Multi-purpose chips are versatile tools to analyze protein-protein, protein-small molecule, DNA/RNA-protein and DNA/RNA-small molecule interactions.

Biochip Design

The detection spots are functionalized with one nanolever NL-B48. The 5'-end of the DNA is fixed on the surface while the 3'-end carries a yellow fluorescent dye (R1).

Biochip Layout I Flow channel with 6 single sequence (B) spots
With 6 single sequence spots, the electrode functionalization features replicates in favor of better measurement statistics.

For more information about the DNA sequences, please contact us at info@dynamic-biosensors.com.

DNA for the Biochip
Each Biochip comes with unmodified complementary DNA:
cNL-B48 (500 µL, c = 1 µM)
Application Areas

<table>
<thead>
<tr>
<th>Application Areas</th>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binding Kinetics</td>
<td>$k_{on}$, $k_{off}$, $K_D$</td>
</tr>
<tr>
<td>Binding Affinity</td>
<td>$K_D$, titration curve, n (Hill coefficient)</td>
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<tr>
<td>Protein Diameter</td>
<td>$D_H$ (Hydrodynamic diameter)</td>
</tr>
<tr>
<td>Conformational Change</td>
<td>$\Delta D_H$ (relative change of hydrodynamic diameter)</td>
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<tr>
<td>Melting &amp; Thermodynamics</td>
<td>$T_M$, $\Delta G$, $\Delta H$, $\Delta S$</td>
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<tr>
<td>Multimers &amp; Aggregation</td>
<td>Monomer-dimer discrimination, aggregation</td>
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<tr>
<td>Nuclease &amp; Polymerase Activity*</td>
<td>$k_{cat}$, $K_M$, $T_{activate}$</td>
</tr>
<tr>
<td>Bispecific Binders &amp; Avidity*</td>
<td>Binding affinity/avidity/kinetics;</td>
</tr>
</tbody>
</table>

* for this application, other biochips (ENZ or BIF) are recommended

Biochip Handling

The biochip is ready to use. For research use only.
Avoid touching or picking up the biochip with your hands as this may cause electrostatic discharge, which harms the biolayer. Instead, always use the vacuum tweezers provided with the instrument when handling the biochips.
After installing the biochip in the DRX instrument and before starting an experiment be sure that the selected channel has been passivated with passivation solution (Order No. SOL-PAS-1-5).
More information about biochip storage and handling can be found in the document “switchSENSE® Biochips Storage Information” – [DOWNLOAD HERE](#).

Grade I Standard

Standard grade chips are batch tested, which means selected chips undergo comprehensive quality control (switching dynamics, voltage-response of the DNA layer, and fluorescence levels). In addition, the fluorescence levels on each electrode are tested to be within specifications. Due to the production process not all detection spots fulfill our high quality standards. It is guaranteed that 20 or more detection spots are QC approved.

Compatible Functionalization Kits

All compatible functionalization kits for this biochip are listed on our website: [www.dynamic-biosensors.com/reagents/](http://www.dynamic-biosensors.com/reagents/)

Contact

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