

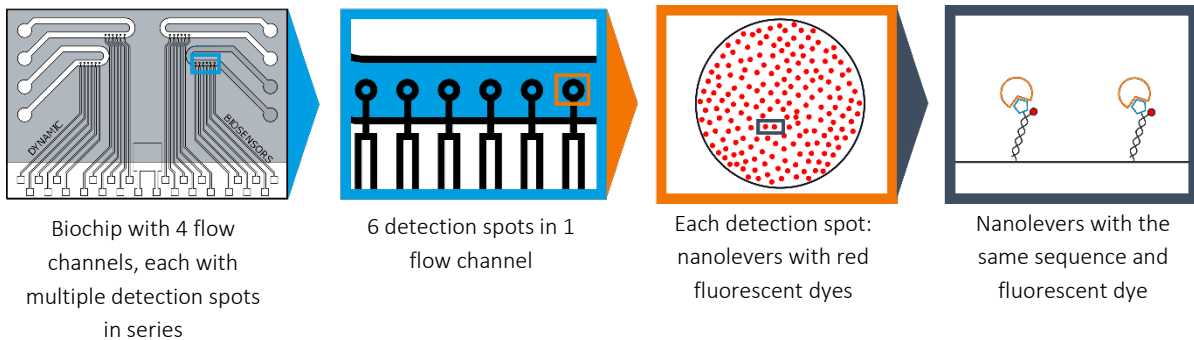
## switchSENSE<sup>®</sup> Biochip MPC-48-1-R1-S

### Product Description

Product Code	MPC-48-1-R1-S
Suitable for	switchSENSE <sup>®</sup> DRX <sup>red</sup>
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.

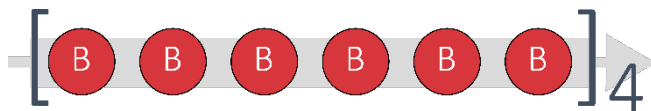
### Biochip Design



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 | 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](mailto:info@dynamic-biosensors.com).

### DNA for the Biochip

Each Biochip comes with unmodified complementary DNA:  
cNL-B48 (500  $\mu$ L, c = 1  $\mu$ M)

## Application Areas

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

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

## Biochip Handling

The biochip is ready to use. For research only.

Avoid touching or picking up the biochip with your hands as this may cause biolayer electrostatic discharge. 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 is 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".

## Grade I Standard

Standard grade chips are batch tested which means one out of a batch undergoes a comprehensive quality control – proper switching dynamics, calibration (voltage-response of the DNA layer) and fluorescence levels. In addition each biochip is tested for proper fluorescence levels on each electrode. Due to the production process, not all detection spots fulfill our high quality standards. Each standard grade biochip is certified as having 20 or more active detection spots.

## 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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