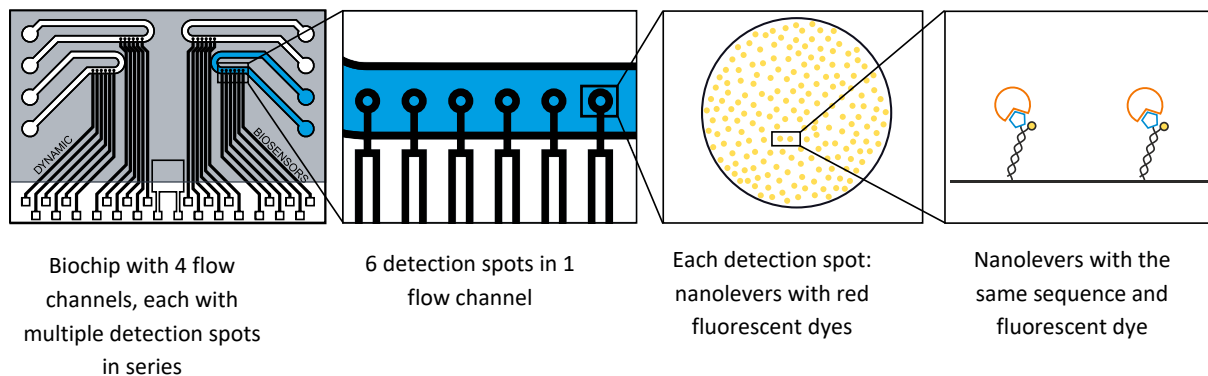


## Product Description

Product Code	CAS-48-2-Y1-S
Suitable for	switchSENSE® DRX <sup>yellow</sup>
Storage	Store at 2-8 °C, dry in the dark
Layout	2 reference spots (nanolever A) and 4 probe spots (nanolever B)
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, either NL-CAS-B48 on probe spots or NL-CAS-A48 on reference spots. The 5'-end of the DNA is fixed on the surface while the 3'-end carries a yellow fluorescent dye (Y1).

## Biochip Layout I Flow channels with 2 reference (A) & 4 probe (B) spots (end-point referencing in same channel)

This biochip - presenting 2 reference sequence (NL-A48) and 4 probe sequence (NL-B48) spots - enables to measure the reference in the same flow channel.



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-CAS-A48 (500 µL, c = 1 µM)

cNL-CAS-B48 (500 µL, c = 1 µM)

## 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 use only.

Avoid touching or picking up the biochip with your hands as this may cause electrostatic discharge, which harms the bilayer. 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 “**switch**SENSE® 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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