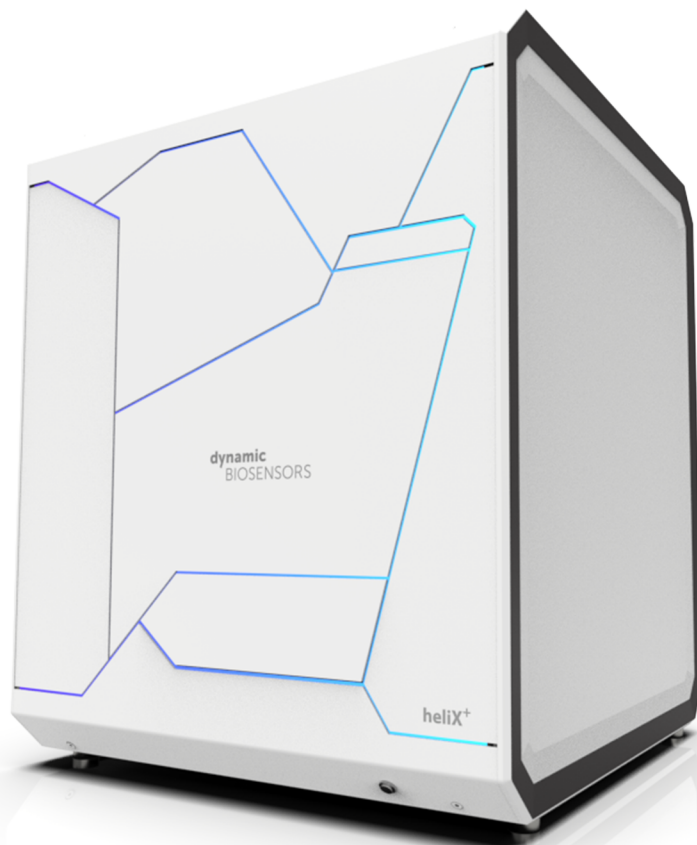


## Biotin Capture kit

with red dye **Ra**

Dynamic Biosensors GmbH & Inc.

HK-SA-1 v6.1

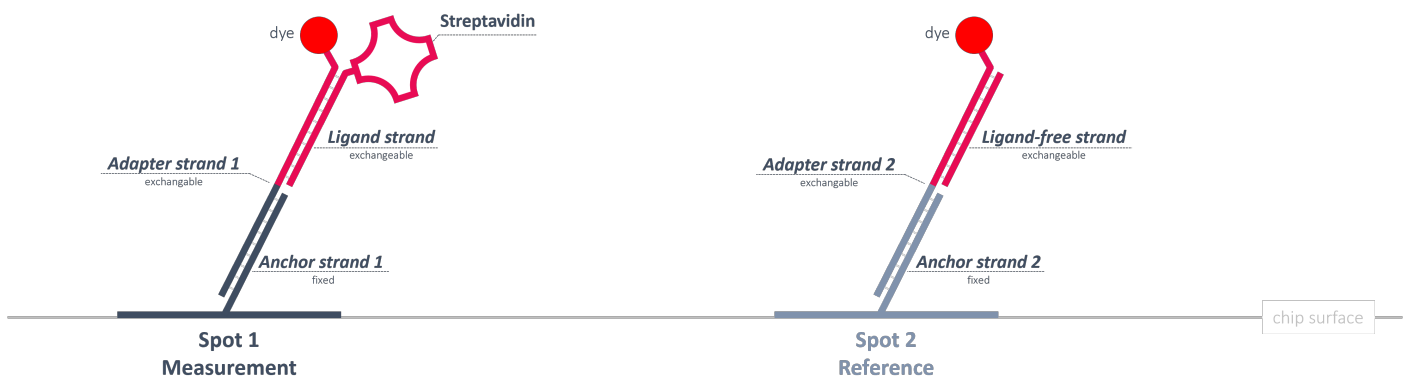


## Key Features

- This kit is designed for capture of **biotinylated molecules** using **Streptavidin**.
- Compatible with **helix<sup>®</sup> Adapter Chip**.
- Includes **Adapter strands** and **Ligand strand** modified with Streptavidin for **20 regenerations**.
- For functionalization of **Spot 1** and **Spot 2**.
- **Adapter strands 1** and **2** carry a moderately hydrophilic red dye (**Ra**) with a single positive net charge.

## helix<sup>®</sup> Adapter Chip Overview

2 spots with 2 different anchor sequences for DNA-encoded addressing. Spot 1 is functionalized with the capture molecule while Spot 2 is used as real-time reference.



## Product Description

Order Number: **HK-SA-1**

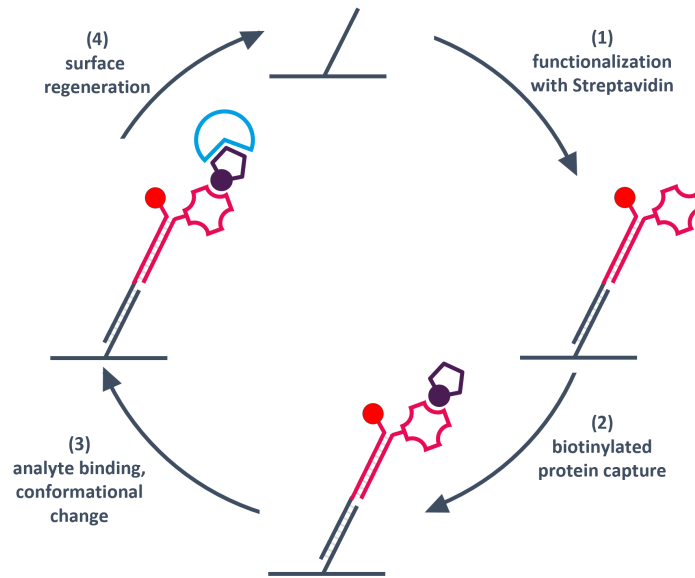
Table 1. Contents and Storage Information

Material	Cap	Concentration	Amount	Buffer	Storage
<b>SA - Ligand strand</b>	Green	500 nM	2 x 100 µL	TE40 <sup>[1]</sup>	2-8°C
<b>Adapter strand 1 - Ra</b>	Black	400 nM	2 x 100 µL	TE40 <sup>[1]</sup>	-20°C
<b>Adapter strand 2 - Ra - lfs</b>	White	200/250 nM	2 x 200 µL	TE40 <sup>[1]</sup>	-20°C

For research use only.

This product has a limited shelf life, please see expiry date on label.  
After preparation of ready to use solution the expiry date is **3 months**.

## Workflow of a heliX<sup>®</sup> SA - capture assay



1. The anchor strand (ssDNA) immobilized to the surface of the **heliX<sup>®</sup> Adapter Chip** is hybridized with complementary DNA strands modified with **Streptavidin**.
2. The **biotinylated ligand** of interest is captured on the surface during the measurement run.
3. Measurement of the analyte binding kinetics or conformational change upon analyte binding.
4. Surface regeneration by injection of a high pH solution. Chip surface goes back to the original state. This step can be followed by a new hybridization of fresh ligand with Streptavidin.

## Preparation

1. Mix 100  $\mu\text{L}$  **SA - Ligand strand** with 100  $\mu\text{L}$  **Adapter strand 1 - Ra**.
2. Incubate the solution of step 1 at **RT** at **600 rpm** for **30 min** to ensure complete hybridization.
3. Mix 200  $\mu\text{L}$  **Adapter strand 2 - Ra - lfs** to the sample after step 2.

The solution (400  $\mu\text{L}$  in total) is ready to use for a biochip functionalization.

Please aliquot and store the ready to use solution at 2-8°C. **Use up within 3 months.**

The kit contains material for the preparation of two separate ready to use solutions with 400  $\mu\text{L}$  each.

## Assay Setup in heliOS

Go to **heliOS** > create a **New Assay Workflow** > add **Custom Assay** > load **Capture with Kinetics** > modify the parameters based on your needs and run the assay.

Suggested assay parameters (e.g., flow rate, time, LED power, etc.) are within the **heliOS** assay.

**TIP**

*As streptavidin owns four different binding sites, multiple ligands can be captured per nanolever, leading to avidity effects when measuring multispecific analytes. In the case, consider using the conjugation approach.*

For further questions, please contact the support team at [support@dynamic-biosensors.com](mailto:support@dynamic-biosensors.com)

## Useful Order Numbers

Table 2. Order Numbers

Product Name	Comment	Order No
<b>heliX<sup>®</sup> Adapter Chip</b>	Chip with 2 detection spots	ADP-48-2-0
<b>10x Passivation solution</b>	For passivation of chip surface	SOL-PAS-1-5
<b>Regeneration solution</b>	For regeneration of chip surface	SOL-REG-1-5

## Contact

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[www.dynamic-biosensors.com](http://www.dynamic-biosensors.com)

Instruments and chips are engineered and manufactured in Germany.

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[1] TE40: 10 mM Tris, 40 mM NaCl, 0.05 % Tween20, 50 µM EDTA, 50 µM EGTA