heliX+
User Manual

dynamic
BIOSENSORS

Fc Capture A/G Kit

with red dye **Ra**

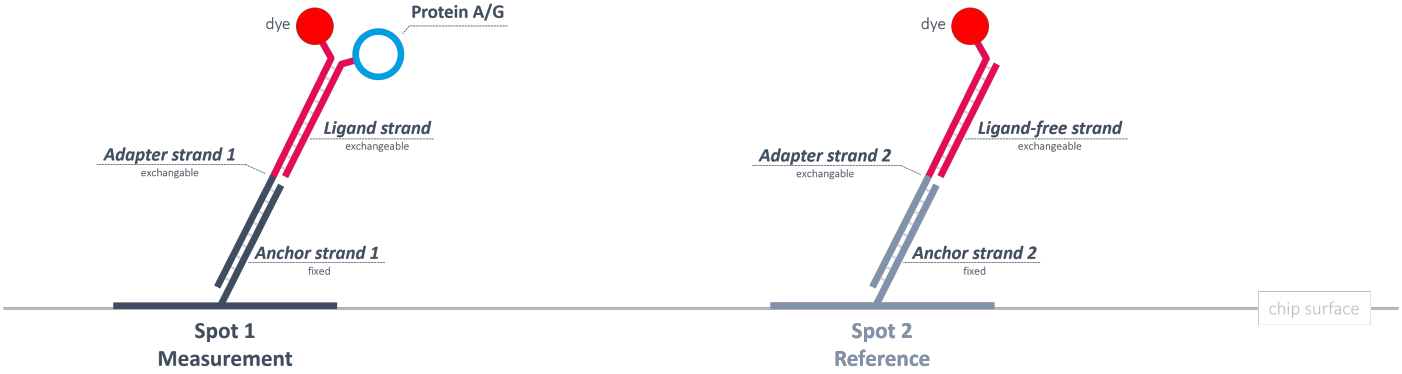
Dynamic Biosensors GmbH & Inc.
HK-FC-3 v4.1

Key Features

- This kit is designed for capture of **IgG molecules** binding to **Protein A and G**.
- Compatible with **heliX® Adapter Chip**.
- Includes ***Adapter strands*** and ***Ligand strand*** modified with Protein A/G 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® 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-FC-3**

Table 1. Contents and Storage Information

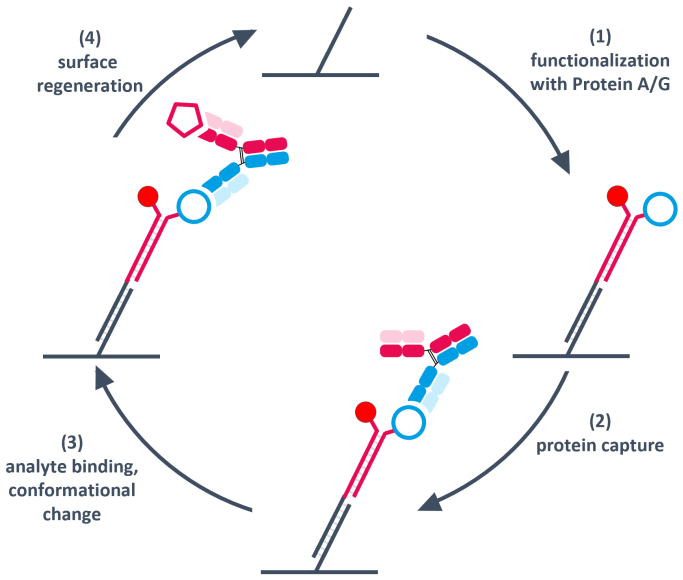
Material	Cap	Concentration	Amount	Buffer	Storage
Protein A/G - Ligand strand	Red	500 nM	2 x 100 µL	TE40 [1]	2-8°C
Adapter strand 1 - Ra	Black	400 nM	2 x 100 µL	TE40 [1]	-20°C
Adapter strand 2 - Ra - lfs	White	200/250 nM	2 x 200 µL	TE40 [1]	-20°C

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 **6 months**.

Protein A/G binds to all IgG subclasses from various mammalian species, including all IgGs that bind to both Protein A and Protein G.

Workflow of a heliX® FC - capture assay



1. The anchor strand (ssDNA) immobilized to the surface of the **heliX® Adapter Chip** is hybridized with complementary DNA strands modified with **Protein A/G**.
2. The **IgG** of interest is captured on the surface during the measurement run.
3. Measurement of the analyte binding kinetics.
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 hyridization of fresh ligand with Protein A/G.

Preparation

1. Mix 100 µL **Protein A/G - Ligand strand** with 100 µL ***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 µL ***Adapter strand 2 - Ra - lfs*** to the sample after step 2.

The solution (400 µL 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 6 months**.

The kit contains material for the preparation of two separate ready to use solutions with 400 µL 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 | *If the fluorescent change signal upon analyte binding is very small, consider using the conjugation approach, in order to move the binding site closer to the dye.*

For further questions, please contact the support team at **support@dynamic-biosensors.com**

Useful Order Numbers

Table 2. Order Numbers

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

Contact

Dynamic Biosensors GmbH
Perchtinger Str. 8/10
81379 Munich
Germany

Dynamic Biosensors, Inc.
300 Trade Center, Suite 1400
Woburn, MA 01801
USA

Order Information **order@dynamic-biosensors.com**

Technical Support **support@dynamic-biosensors.com**

www.dynamic-biosensors.com

Instruments and chips are engineered and manufactured in Germany.

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