

Biacore™ 8 series

LABEL-FREE INTERACTION ANALYSIS

Biacore™ 8 series efficiently delivers quality binding data to meet your toughest challenges in screening, characterization, process optimization, and quality control (Fig 1). Our 16 flow-cell SPR systems, Biacore™ 8 series, come in two configurations: Biacore™ 8K for high-throughput screening and characterization and Biacore™ 8K+ for a significantly higher capacity.

These eight-needle high-sensitivity surface plasmon resonance (SPR) systems rapidly provide reproducible kinetics, affinity and concentration data, and shortens your time to results by up to eight times compared to one needle systems.

The blend of system flexibility and throughput reduces the experimental cycle time, even for complex targets and drug formats such as bispecific antibodies. This offers more opportunity for screening in drug discovery and development of small molecules to large viruses in pure or complex samples.

Application methods are easily transferred to other labs or other Biacore™ 8 series systems and to our one needle SPR platform Biacore™ 1 series.

Biacore™ 8 series SPR systems provide:

- Superb data quality while increasing your throughput eight-fold, compared to one needle SPR systems
- Interaction analysis for screening, kinetics, affinity, epitope binning, concentration, and relative potency
- Higher operational efficiency with capacity options and streamlined assay development in parallel
- Modular configuration with option for analysis in a GxP regulated environment
- Rapid optimization of assay conditions and troubleshooting



Fig 1. Biacore™ 8K and Biacore™ 8K+ efficiently deliver high-quality affinity and kinetics data for small molecule and biotherapeutic screening and characterization.

One SPR platform for small molecule and biotherapeutic screening/ characterization

Biacore™ 8 series gives you a single solution for interaction analysis in screening, characterization, process optimization, and quality control. They are suited to the analysis of samples containing the smallest fragments to large multidomain proteins, even in crude matrices. Applications include:

- Selection of biotherapeutic or small-molecule hits based on affinity and kinetic ranking
- Characterization and optimization of selected binders based on detailed kinetic and affinity information
- Identify and bin antibodies based on epitope, even when the antigen dissociates rapidly
- Reproducible and reliable determination of protein concentrations and potency
- Obtain titer, concentration, and kinetic information on your biologic candidates in a single assay cycle

High-quality data in less time, even for the toughest applications

The eight-needle parallel setup boosts efficiency regardless of the number of samples running. With 2D Kinetics™ methodology, detailed kinetics for a single interaction can be obtained in 35 min without spending time on assay development. When working with multiple samples, Parallel Kinetics™ screenings efficiently identify hits from 384 samples in less than 6 h. Both systems support fast scouting of assay conditions, screening 96 buffer conditions in 80 min, which optimizes your assay to deliver concentration and interaction data you can rely on. An 8 × 8 epitope binning array (64 interactions) can be performed in about 2 h.

To help you get the best possible data, we support you and your applications with a broad portfolio of consumables and method protocols, while providing you with access to our local application experts.

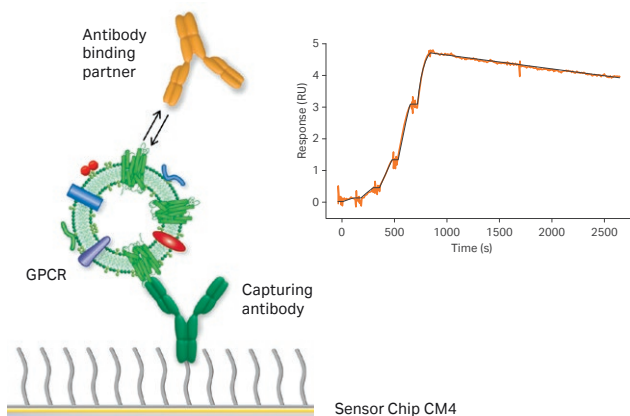


Fig 2. The high sensitivity and robustness of Biacore™ 8K and Biacore™ 8K+ systems allow the analysis of GPCRs in crude membrane preparations.

Biacore™ 8 series systems provide the same data quality as our one needle Biacore™ systems and come with the sensitivity and stability that is crucial to generate binding data with quality to support important decision making. The sensitivity allows for screening and characterization of the smallest organic compounds and enables confident kinetic analysis over a wide kinetic range, from very fast on-rates to the slowest off-rates. High sensitivity also opens up for analysis of low-abundance molecules or sensitive, complex targets.

Interactions involving challenging targets

Analyzing GPCRs and other sensitive targets

The high sensitivity of Biacore™ 8 series SPR systems generates reliable data for rare or sensitive targets such as G protein-coupled receptors (GPCRs, Fig 2) where only a fraction of the protein might retain its biological activity throughout the analysis. Analysis may be performed directly in crude matrices such as a membrane preparation. This avoids unnecessary sample handling that risks negatively affecting the activity level. The high sensitivity also allows for analysis of the smallest organic compounds even for low-affinity interactions (K_D in the millimolar range), which is important for reliable, small molecule fragment screening.

Analysis of bivalent analytes

The systems allow for full flexibility in the characterization of bivalent analytes such as antibodies or dimeric proteins. Complication from avidity is minimized by using very low immobilization levels, which renders reliable data (Fig 3). Low immobilization levels generally give fewer secondary interactions and increase the proportion of target accessible for binding; some targets even exhibit surface aggregation at higher densities. Cleaner interaction data not only gives more accurate results but also makes analysis simpler and faster, saving time.

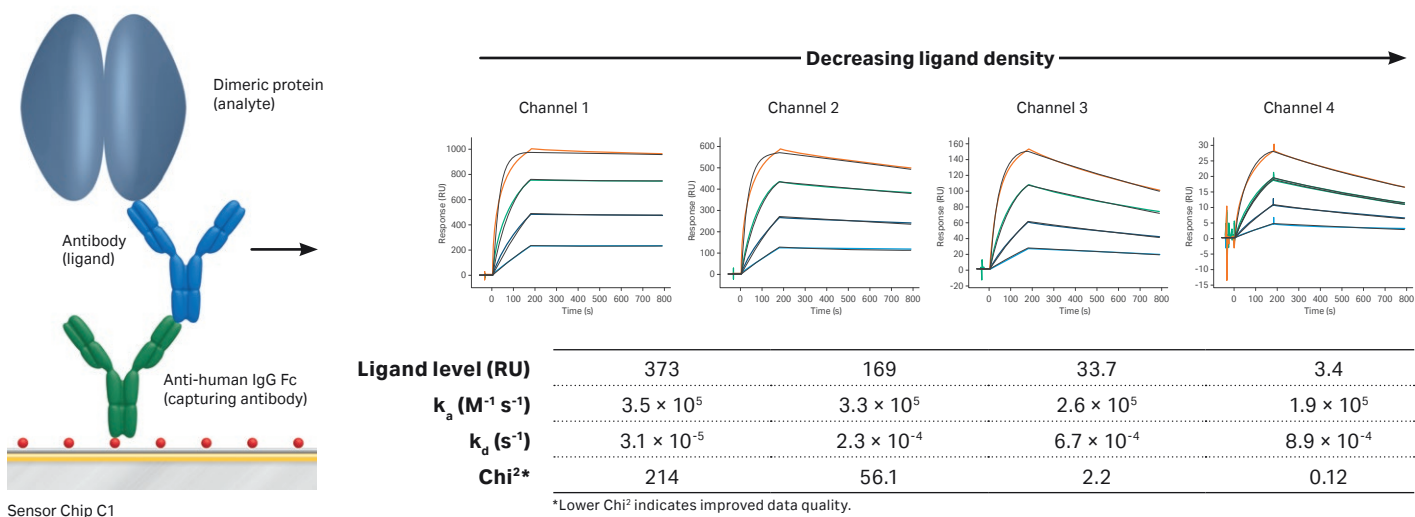


Fig 3. Analysis of a bivalent, dimeric protein with a molecular weight (M_r) of 660 000. The avidity diminishes with the ligand density revealing the true kinetics of the interaction. Data obtained using Biacore™ 8K, courtesy of Schraeml, Biehl, von Proff, Roche Diagnostics GmbH, Centralised and Point of Care Solutions, Penzberg, Germany.

High sensitivity enables accurate measurement of fast on-rates and slow off-rates

Biacore™ 8 series enables measurement of exceptionally fast on-rates that allows for differentiation between rapid binders. This is an important feature when studying biological processes limited by bioavailability (Fig 4). At the other end of the kinetic spectrum, today's antibody discovery often generates many high-affinity hits in every campaign. Differentiating these stable binders increases the challenge on the analytical system used as it requires both high sensitivity and stability over time. The high sensitivity of Biacore™ 8 series, in terms of low baseline noise and drift, provides effective differentiation between stable binders, and allows reliable determination of very slow off-rates down to 10^{-6} s^{-1} (Fig 5).

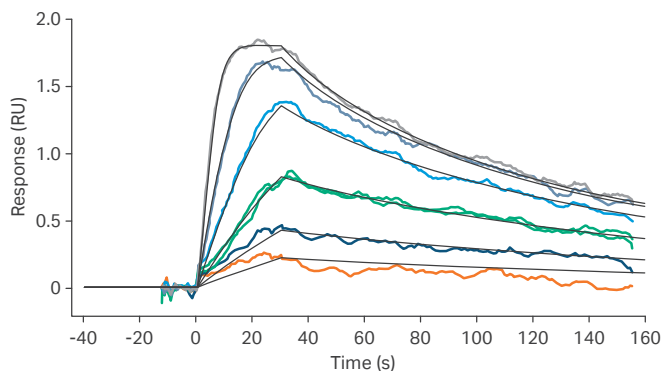


Fig 4. The high sensitivity of Biacore™ 8K and Biacore™ 8K+ enables confident analysis of fast on-rates. Sensorgram showing binding of melagatran to thrombin: association constant (k_a) $4.0 \times 10^7 \text{ M}^{-1} \text{ s}^{-1}$; k_d 0.014 s^{-1} analyzed on Biacore™ 8K.

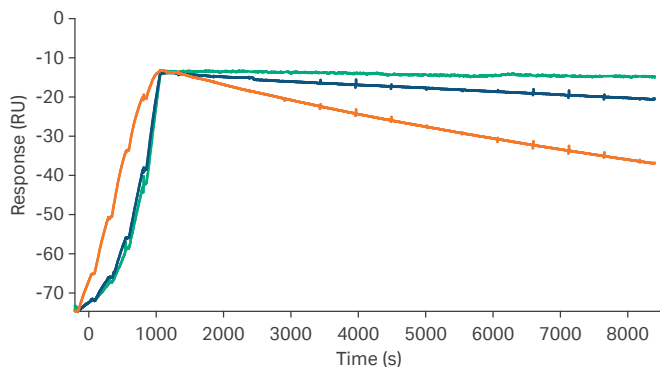


Fig 5. Biacore™ 8 series provide sensitivity and stability that enables the differentiation of tight binders with dissociation rate constants (k_d), down to 10^{-6} s^{-1} .

Parallel setup maximizes operational efficiency

Biacore™ 8 series systems are designed to maximize operational efficiency by combining rapid high-quality data with the smooth operation that comes from user-friendly and application-specific software modules and interactive hardware. The systems feature an eight-channel parallel setup with a microfluidic injection concept which enables each channel to provide high quality, reference-subtracted data (Fig 6). The simple 8×2 flow cell-setup makes planning, preparation, and operation straightforward and easy to understand. A fluidic delivery system is required for accurate kinetic determinations and the microfluidic system has been refined to optimize stability and robustness while not compromising on performance. Biacore™ 8 series systems provide interaction data directly from crude matrices such as hybridoma supernatants, membrane preparations, or serum samples.

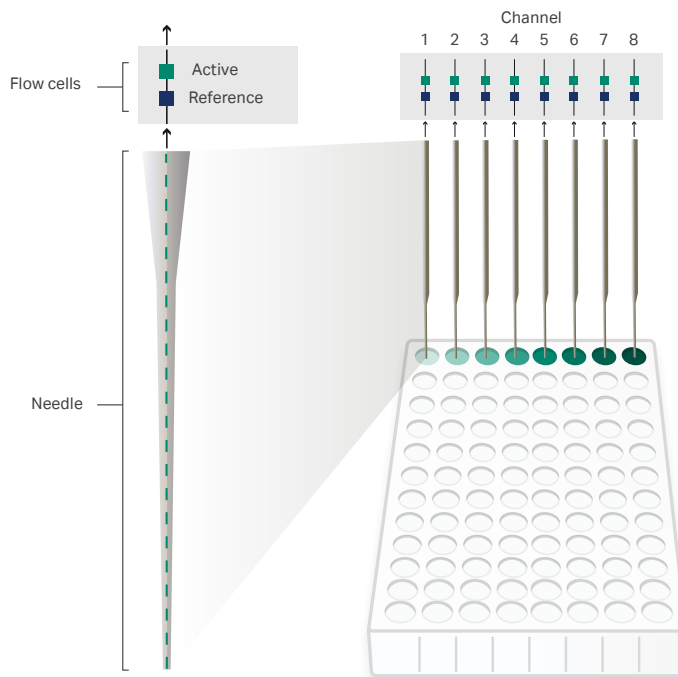


Fig 6. The simple, eight needle, eight channel concept with two flow cells per channel simplifies assay setup and operation of Biacore™ 8 series. This allows assay optimization of 8 samples in parallel.

Sample capacity

Biacore™ 8 series support the use of 96- and 384-well microplates in standard and deep-well formats of up to 2 mL volume (Fig 7). Both samples and reagents are taken from standard microplates with no need for special vials.

The sample hotel of Biacore™ 8K accommodates two trays. The sample hotel of Biacore™ 8K+ accommodates up to six trays, which increases up-times/asset utilization by up to 30% per week. Each tray can hold two microplates which translates to a maximum unattended run capacity of 1536 and 4608 samples for Biacore™ 8K and Biacore™ 8K+, respectively. This makes it possible to screen a full fragment library (with an average size of 2000 compounds) in a single experiment, without manual intervention or the need for external robotics.

Trays may be accessed during run to optimize operational efficiency for both systems. The sample hotel is temperature controlled. Optimal assay performance is obtained by keeping samples at the same temperature as the analysis temperature. To ensure the integrity of samples and reagents in extended runs, the sample hotel can be kept refrigerated.

Biacore™ 8 series systems are equipped with a buffer selector enabling change of up to four different running buffers without the need for manual intervention, allowing for even higher efficiency.



Fig 7. Biacore™ 8K accommodates up to four 96- and 384-well microplates simultaneously, all in a temperature-controlled environment for optimal assay performance or to ensure sample integrity in extended runs.

Interaction data at physiological temperatures

Biacore™ 8 series provides reliable data at physiological analysis temperature enabling better prediction of *in vivo* behaviour of therapeutic candidates. Heated or cooled needles ensure that the samples have the appropriate temperature when being analysed, even at elevated flow rates (Fig 8).

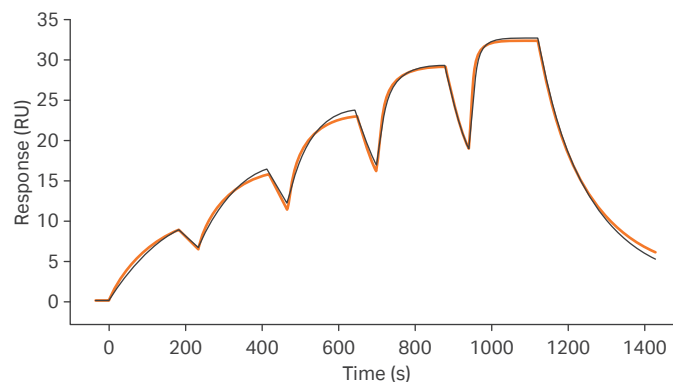


Fig 8. Biacore™ 8 series provide high-quality data at physiologically relevant temperatures. Data shows the analysis of β 2-microglobulin vs anti- β 2-microglobulin at 37°C.

Rapid selection of the most relevant hits

With its parallel eight-channel setup with multiple microplate capacity, Biacore™ 8 series rapidly generates screening data for selection of the most relevant hits based on binding information. More than 2300 small molecule fragments may be screened using **Binding level screen** and ranked in 24 h based on binding response and desired sensorgram profile.

For screening based on kinetic information, an initial single concentration screen of 384 samples is performed in less than 6 h, leaving time for setting up and starting the follow-up experiment on the samples with the best kinetic profile before going home for the day.

For rapid and automated analysis of large data sets Biacore™ 8 series can significantly reduce the manual, time-consuming steps of data curation and quality control by adding supervised machine learning, Biacore Intelligent Analysis™ software. It's an optional, add-on software extension that currently offers support for two analysis types, **Binding level screen** and **Affinity screen** for fragments.

Characterization and optimization of the most promising binders

Regardless of your application, the systems provide efficient approaches to kinetics and affinity analysis. Affinity can be determined either with steady-state affinity analysis or via the ratio of kinetic rate constants. For small molecule fragments, specific affinity screening tools such as control based R_{max} are also available using Biacore™ Insight Software and Biacore™ Insight Extended Screening Extension.

For kinetic evaluation, the parallel setup can be utilized in several ways to ensure the shortest possible run time regardless of number of samples (Fig 9). By distributing the sample concentration series with associated blanks along the microplate, multicycle high-quality kinetic parameters can be obtained up to eight-fold faster than with one needle systems.

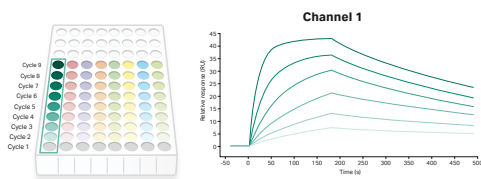
For a single sample, faster determination can be obtained by distributing the concentration series across the plate without loss of accuracy. Kinetic analysis can also be performed using

Biacore Single-Cycle Kinetics (SCK)™ to simplify analyses involving unstable targets as it can be performed without surface regeneration between concentrations. It also reduces assay run time and is the preferred choice for rapid kinetic characterizations of many samples, enabling analysis of 64 samples in 5 h.

For samples where prior knowledge of affinity is lacking, a novel 2D Kinetics™ approach can be applied to deliver full kinetic characterization data within 35 min without extensive assay development. 2D kinetics combines the eight-channel parallel sampling setup of Biacore™ 8 series with Biacore Single-Cycle Kinetics (SCK)™. The sample is diluted in two dimensions creating a large concentration matrix. All dilutions are thereafter injected in a single cycle and globally fitted to provide reliable, high-quality kinetic data. If a capture approach is used, several consecutive samples can be analysed using the 2D Kinetics™ approach without the need for regeneration scouting.

Biacore Multi-Cycle Kinetics (MCK)™

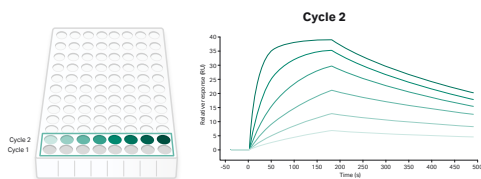
- Suitable when different ligands are to be immobilized
- Suitable also for many samples against one ligand



Ex. Cycles 1–9: sample concentrations and blanks are placed per channel

Parallel Kinetics™

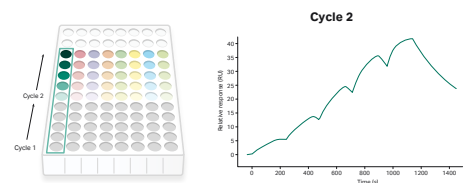
- Short run time for few samples
- Kinetic analysis in only two cycles (one blank cycle)
- Beneficial for samples with long dissociation times
- Alternative set-up: two samples, four concentrations



Ex. Cycle 2: sample in 8 concentrations (Cycle 1: blank cycle)

Biacore Single-Cycle Kinetics (SCK)™

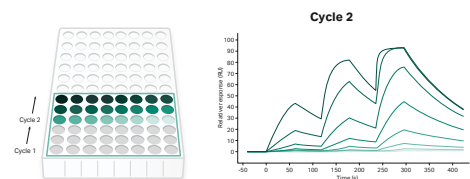
- Fast run time
- No regeneration needed
- 2–5 concentrations per injection
- Beneficial for long dissociation times and kinetic screen



Ex. Cycle 2: 5× sample conc. (Cycle 1: 5× blank conc.)

2D Kinetics™

- In depth analysis in only one sample cycle
- Sample diluted directly into plate
- Sample diluted in two dimensions to cover a wide range
- No preknowledge about affinity or regeneration needed



Ex. Cycle 2: sample in 24 concentrations (Cycle 1: blank cycle)

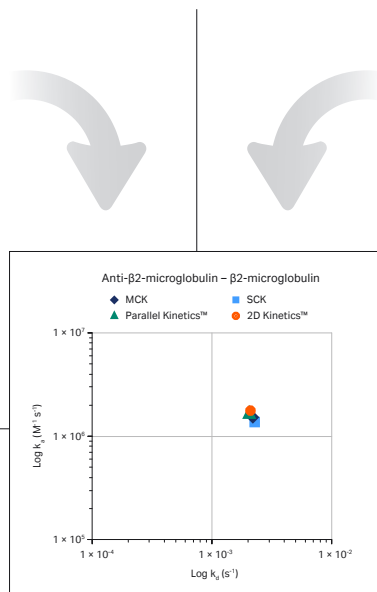


Fig 9. Biacore™ 8 series approaches to kinetic determinations.

Fast assay optimization for better results

Within drug discovery, an increasing amount of work is performed with more challenging targets such as membrane bound receptors like GPCRs, and ion channels. These proteins are sensitive in nature and it is very important to identify the right assay conditions that retain their activity over the duration of the entire assay. Biacore™ 8 series systems are equipped to facilitate efficient assay development and optimization. The eight-channel setup increases the number of conditions tested per unit time up to eight-fold compared with one needle systems. With the **ABA** command large matrices of buffer variations can be prepared in microplates and rapidly tested (Fig 10). The **ABA** buffer scouting approach allows testing of 96 buffer variations in less than 80 min.

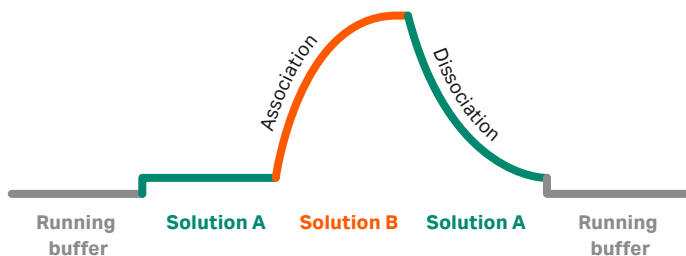


Fig 10. **ABA** command allows two different solutions to be injected over the surface in the same cycle in the following order: solution A, solution B, then solution A. This enables buffer scouting to be run directly from one microplate. The **ABA** command may also be used in competition assays. In this case from left to right: Solution A = assay buffer + competitor; Solution B = assay buffer + competitor + analyte.

Explore epitope diversity quickly

Biacore™ Insight Epitope Binning Extension enables automated identification and control to maintain unique and diverse epitopes that may broaden intellectual property protection. This add-on, application-specific extension provides support from run setup through to data evaluation, including predefined methods and an automatic sample plate layout tool to shorten your assay development. All three main assay formats for epitope binning analysis are supported: sandwich, tandem, and premix.

A challenge in epitope binning is that the low affinity of binding between the antigen and the first antibody can lead to the dissociation of the antigen, resulting in the underestimation of binding level of the second antibody. **Dual** command compensates for this by injecting the antigen and the second antibody solutions in direct sequence with no intermediate washing steps, minimizing the dissociation of antigen before the secondary antibody is injected. Predefined evaluation methods automatically processes data generated on Biacore™ 8 series systems.

Concentration determinations and potency

Drug development and quality control demands increased efficiency to allow for higher productivity without compromising data quality. Biacore™ 8 series systems are equipped with tools that allow for efficient concentration determination regardless of sample size.

The eight-channel set-up can be used to minimize time to results by running in a parallel fashion allowing eight concentrations to be determined in 30 min. A full 96-well sample plate is, with a serial setup, determined in 100 min. See Table 1 for typical run times for applications using Biacore™ 8K and Biacore™ 8K+ systems, respectively.

Biacore™ Insight Concentration and Potency Extension facilitates reproducible and robust concentration determinations of biologically active protein, not the total protein amount that would be obtained from an A280 determination. The software enables seamless determination of drug potency and parallel line analysis (PLA) without the need for tedious data import/export between different software. The precision and automation of the system reduces hands-on time and generates highly reproducible data over a wide dynamic range with CVs typically below 5%. The possibility to include control samples allows you to ensure rigorous quality control for your assay.

Table 1. Typical run times for various applications using Biacore™ 8K and Biacore™ 8K+

Biacore™ 8 series	No. of samples	Run time Biacore™ 8K	Run time Biacore™ 8K+
Kinetic characterization	64	4 h	4 h
Kinetic screen, single conc.	384	9 h	9 h
2D Kinetics™ of unknown	1	35 min	35 min
Clean screen	1536/4608	3 h	8.5 h
Binding level screen	384	4 h	–
	3456	–	33.5 h
Affinity screen	64	5 h	5 h
Epitope binning	Up to 30 × 30 array	33 h	–
	Up to 40 × 40 array	–	59 h
Concentration analysis using serial calibration curve	96	100 min	100 min
Concentration analysis using parallel calibration curve	8	30 min	30 min

Queue up methods — save time and sensitive samples

To maximize instrument usage, utilize the **Activity queue** feature in Biacore™ Insight Control Software. The steps you usually take during analysis on a Biacore™ SPR instrument, from changing buffer solutions, chip docking, immobilization methods, analysis methods, temperature changes to cleaning procedure can be added to the **Activity queue** — which minimizes unnecessary waiting times. For automatic control of the ligand attachment levels, immobilization checkpoint can be added to the **Activity queue**. This function reduces the need of manual confirmation of adequate immobilization prior to analysis by comparing the surface immobilization levels with acceptance criteria entered by the user. If any results fall outside the acceptance criteria, the **Activity queue** is paused, and user input is required to resume or stop the **Activity queue**. If results are within the acceptance criteria, the **Activity queue** continues with subsequent activities (Fig 11).

Following start of the **Activity queue**, remaining samples and reagents can be prepared while the instrument is running. Run status display helps you further plan lab time.

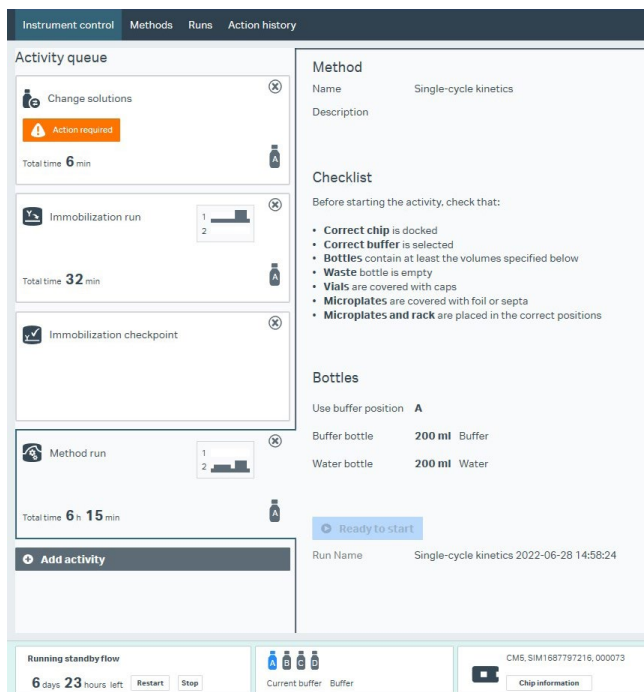


Fig 11. Activity queue lined up with **Change solutions**, **Immobilization run**, **Immobilization checkpoint** followed by a Biacore Single-Cycle Kinetics (SCK)™ method run.

When working with sensitive samples, the **Activity queue** and the temperature-controlled sample hotel is a powerful combination that lets you save samples, time, and costs. Assays using surfaces with sensitive ligands can be queued up in a time efficient manner overnight or over the weekend. Sensitive analytes requiring extensive sample preparation to maintain stability can be loaded in plates and stored in the sample hotel at 4°C until analysis.

Biacore™ Insight Software — make SPR simpler and faster

Biacore™ Insight Software enables a streamlined approach to run, analyze, visualize, and export your SPR data and results from Biacore™ 8 series and Biacore™ 1 series. The unified instrument control and data evaluation platform is designed to optimize your experimental setup and the analysis of SPR data. This is accomplished without a complicated user experience and minimizes time spent on training and designing a unique report out template for your team.

The modular toolbox approach allows you to pick the right tool for your analysis job. Optimized solutions for key applications via optional add-on software extensions provide you with additional functionality and tools to streamline your analysis and reduce time to result. The intuitive and modular software design allows you to maximize the application versatility and expand system usage to your current needs, irrespective of experience, use case, or stage of research.

The Interactive run workspace within Biacore™ Insight Control Software lets you take full control of the instrument and the software provides immediate feedback. In contrast to run methods, cycles are not defined in advance. Instead, you add commands and make decisions based on the result of previous injections, thereby building up the cycle as the run is proceeding.

Biacore™ Insight Evaluation Software enables evaluations to be performed with just a few clicks. It is effective for the rapid analysis of large screening campaigns as well as deep kinetic characterization of a single interaction, epitope binning experiments, or reproducible quantification of your valuable samples. Generic tools scale with the size of your experiment rendering fast, trustworthy results — regardless of the number of samples analyzed. The flexible interface is configurable to maximize space for your most important tasks.

For more details, please see the data file, [Biacore™ Insight Software](#).

Visualize your SPR data

The flexible result export feature in Biacore™ Insight Evaluation Software provides the means to export selected, or comprehensive data for continued data processing, result reporting, or storage in the company database.

You can transfer data into Microsoft PowerPoint format (Fig 12) and modify the presentation of your data using the extensive tool set and layouts in the presentation application — this makes it easy to share data with your colleagues and peers. Additional export options, JSON and XML format, are available in Biacore™ Insight Data Integration Extension.

The combination Biacore™ SPR instrument and Biacore™ Insight application-specific software extensions provide support from run setup to data evaluation and bring new ways to visualize your data.

Biacore™ consumables for reproducible data with minimum time and effort

Biacore™ 8 series operates using the extensive range of Biacore™ Series S sensor chips, which offer support for analysis of a wide range of interactions. A variety of capture kits offer several options for capturing the most common antibodies and tags to significantly reduce the time and effort you need to spend on developing your assay. The range of Biacore™ consumables also includes coupling kits, with selected reagents for stable, covalent attachment of the ligand to the surface. Convenient, ready-made buffers and solutions developed and verified to work in Biacore™ systems are also available to further enhance analysis efficiency.

Predefined methods with application relevant default settings are available in Biacore™ Insight Control Software for all major assays. Experiments using predefined methods and Biacore™ consumables can be started in minutes.

Join our family, Biacore™ SPR community

As an owner of a Biacore™ system, you are connected to a world of knowledge and experience in interaction analysis. A Biacore™ system comes with professional local application support from highly skilled, experienced application scientists. These scientists can help you to get the most out of your Biacore™ system in all applications.

Thousands of Biacore™ systems are installed globally and over 60 000 scientific articles are published in peer-reviewed journals.

All Biacore™ users are invited to share their experiences and learn more at regional user days, Developments in Protein Interaction Analysis (DiPIA) conferences and on LinkedIn, [Biacore™ SPR community](#).

Our instrument service is performed by specially trained service experts available close to you. They can help improve efficiency by minimizing system downtime. Streamlined maintenance of your equipment and fast response times let you focus on your work to deliver reliable binding analysis results.



Fig 12. The flexible result export feature in Biacore™ Insight Evaluation Software lets you export selected or comprehensive data for continued data processing, result reporting, or storage in a shared database. You can export data in Microsoft Excel, PDF, and Microsoft PowerPoint format. In this example you can see a streamlined analysis of a kinetics experiment as a presentation in slide format.

Support for working in regulated environment

Cytiva has a comprehensive offering to support the use of Biacore™ systems for interaction analysis in a regulated environment. The optional products and services that can be used in combination with Biacore™ 8 series and Biacore™ 1 series are:

- **Biacore™ Insight GxP Extension:** a software extension that enables operation in compliance with current GxP regulations and is specifically designed with a high level of built-in support for 21 CFR Part 11 compliance. Features include **Data integrity, User authorization levels, Audit trail, Version history, Electronic signatures** are used for review and approval of regulated procedures and evaluated results.
- **Validation Support File:** a system assessment report, conformance certificates, and Biacore™ Insight GxP Handbook with recommendations for system setup considering 21 CFR Part 11 compliance.
- **Change Control Notification:** a subscription service allowing users to be notified of system changes, giving increased process robustness in regulated environments.
- **Cytiva's OptiRun™ Qualification Service:** ensures that systems are kept in a qualified state throughout their lifetime.

For more details, please see the data file, [Biacore™ Insight GxP Extension and qualification services](#).

Systems specifications

Technical specifications and characteristics

Detection technology	Surface plasmon resonance (SPR) biosensor
Information provided	Kinetic and affinity data (k_a , k_d , K_D), specificity, selectivity, screening data, epitope binning, concentration and relative potency data
Data presentation	Monitoring of real-time sensorgrams or evaluation data for result tables and result plots
Analysis time per cycle	Typically 2 to 15 min
Automation	60 h unattended run time for Biacore™ 8K 72 h unattended run time for Biacore™ 8K+
Sample type	Small molecule drug candidates to high molecular weight proteins (also DNA, RNA, polysaccharides, lipids, cells, and viruses) in various sample environments (e.g., in DMSO-containing buffers, plasma, and serum)
Required sample volume	Injection volume plus 20 to 50 μ L (application-dependent)
Injection volume	1 to 200 μ L
Flow rate range	1 to 100 μ L/min
Flow cell volume	40 nL
Flow cell height	70 μ m
Data collection rate	1 or 10 Hz
Sample/reagent capacity	4 \times 96- or 384-well microplates, normal, and deep-well (Biacore™ 8K) 12 \times 96- or 384-well microplates, normal, and deep-well (Biacore™ 8K+)
Typical run times	Clean screen (384-well plate): 45 min Binding level screen (384-well plate): 4 h Affinity screen (64 samples): 5 h Kinetic analysis (64 samples): 4 h Kinetic screen, single concentration (384-well plate): 9 h Epitope binning, 8 \times 8 array (64 cycles): 2 h
Analysis temperature range	4°C to 40°C (maximum 20°C below ambient temperature)
Sample storage	4°C to 40°C (maximum 18°C below ambient temperature)
Sample refractive index range	1.33 to 1.39

In-line reference subtraction	Automatic
Number of flow cells	16 in 8 channels
Dimensions (W \times H \times D)	902 \times 875 \times 616 mm
Net weight total	127 kg (Biacore™ 8K) 141 kg (Biacore™ 8K+)
Mains requirements	Processing unit: Autorange voltage 100 to 240 V~, frequency 50/60 Hz
Power consumption	Processing unit: max. 350 VA (Biacore™ 8K) max. 550 VA (Biacore™ 8K+)

Minimum computer requirements

CPU with at least four cores
At least 16 GB internal memory
At least 200 GB free hard disk space
Screen resolution at least 1920 \times 1080
One USB2 port available for instrument connection

Minimum network SQL Server requirements

See recommendations from Microsoft regarding hardware and operating systems.
Uninterrupted power supply

Typical working ranges

Association rate constant (k_a)	Proteins: up to 10^9 $M^{-1} s^{-1}$ LMW molecules: up to 10^7 $M^{-1} s^{-1}$
Dissociation rate constant (k_d)	10^{-6} to $0.5 s^{-1}$
Sample concentration	≥ 1 pM
Molecular weight detection	No lower limit for organic molecules
Baseline noise typically	< 0.02 RU (RMS)
Baseline drift typically	< 0.3 RU/min
Blank subtracted drift	< +/-0.03 RU/min
Immobilized interactant consumption	Typically 0.03 to 3 μ g/flow cell

Data handling and storage

Operating system	Windows 10 (Professional or Enterprise), 64-bit, English version Note: The functionality of Biacore™ Insight software and Biacore™ systems is verified using an English version of Windows. Other languages can cause issues.
Interfacing	Import of sample data and export of results possible
Licenses	Multiple licences available
Server requirements	Includes SQL Server Express 2019. Security and performance improvements are seen with SQL Server Standard or SQL Server Enterprise 2017, or 2019 (available separately from Microsoft)

Notes: The server is supplied by the end user. The system should be installed on the trolley included. Contact your local representative for the latest information regarding on-site requirements.

Compliance

Compliant with	CE, cETLus, EAC, FCC, ICES-001, KC, RCM
Safety	IEC/EN/UL/CSA-C22.2 61010-1, IEC/EN/UL/CSA-C22.2 61010-2-081, EN ISO 12100
Electromagnetic compatibility (EMC)	EN/IEC 61326-1, FCC Part 15 B, ICES-001
Environmental	EN 50581, China RoHS

Ordering information

Product	Product code
Biacore™ 8K Includes: Biacore™ 8K instrument only	29327020
Biacore™ 8K System Includes: Biacore™ 8K instrument (29327020) Table with wheels (29717908) Waste container (29308541) 2 licenses for Biacore™ Insight Software (29310602) 2 licenses for Biacore™ Insight Extended Screening Extension (29310610)	29722782
Biacore™ 8K+ Includes: Biacore™ 8K+ instrument only	29283382
Biacore™ 8K+ and Instrument Kit Includes: Biacore™ 8K+ instrument (29283382) Table with wheels (29717908) Waste container (29308541) 2 licenses for Biacore™ Insight Software (29310602) 2 licenses for Biacore™ Insight Extended Screening Extension (29310610)	29722783
Biacore™ Insight Software extensions	Various licenses ¹

¹ See cytiva.com/biacore for details of the various e-licenses available.

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CY11892-07Feb23-DF

