

Biacore Label-Free Interaction Analysis

2002, Dr. Jared Rutter

PAS domains and metabolic status signaling

In his winning essay, Dr. Rutter describes how metabolite sensing by PAS domains allows essential cellular processes such as circadian rhythm, protein synthesis, and sugar storage to be regulated by cellular metabolism.

Dr. Rutter attended Brigham Young University in Provo, Utah, and graduated in 1996 with a bachelor's degree in molecular biology. He went to Dallas, Texas, to pursue graduate studies at the University of Texas Southwestern Medical Center in the molecular biophysics graduate program. Under the guidance of Steve McKnight, Dr. Rutter studied the regulation and function of two proteins involved in sensing metabolic status and controlling cellular biology.

GE & Science Prize for Young Life Scientists is supported by GE Healthcare and the journal *Science*, which is published by AAAS, the nonprofit society. Used with permission of AAAS © 2007.

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www.gelifesciences.com/science



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www.gelifesciences.com/labcrew for more information.

Label-free Interaction Analysis

Biacore systems characterize molecules in terms of their:

- specificity of interaction
- on and off rates (kinetics)
- binding strength (affinity)
- thermodynamics

The systems also provide sensitive, accurate concentration measurements. This is based on the ability of the biomolecule of interest to interact with a specific binding partner, and may therefore be more informative than generic measurement techniques (total protein concentration for example).

Real time binding data is essential to understand the dynamic interactions between proteins and other biomolecules that drive and regulate biological processes. Biacore systems provide high-quality information-rich data needed for comprehensive characterization of proteins and other molecules.

Used throughout the life sciences

Biacore systems are cited in thousands of peer-reviewed scientific publications and are utilized extensively in academic research institutes and universities worldwide. They are also used by the world's leading pharmaceutical and biotechnology companies.

The high quality binding data obtained from Biacore systems enables scientists to both observe and understand molecular interactions, and is used for a range of purposes including:

- Defining structure/function relationships
- Understanding the dynamics and mechanisms of molecular pathways
- Selecting better drug candidates based on therapeutically important properties
- Selecting optimal binders as research tools for your chosen assay
- Monitoring the development of biopharmaceutical production and purification processes

Key features of Biacore systems

In a typical assay, one interactant is immobilized onto a sensor chip surface, while the other is injected in solution and flows over the surface. The entire interaction process (binding and dissociation) is monitored in real-time without the use of labels using SPR (surface plasmon resonance) detection. A wide range of interactants can be analyzed from LMW compounds (>100 Da), through proteins and nucleic acids, to viruses and whole cells. Many sensor chips types available to enable different types of assay. Efficient analysis of binding data is facilitated by automated design and intuitive control and evaluation software.

Draw conclusions with confidence

Drawing the right conclusion at the right time is the key to success, from basic research through drug discovery and development to manufacturing QC. No other techniques can provide such comprehensive information in real time, without the use of labels, and in one system.

For more information, please visit www.gelifesciences.com/biacore

Biacore A100



Biacore A100 is designed for applications requiring high sample throughput using small panels of proteins. The system can also be used for detailed characterization studies.

- **Unmatched productivity for label-free interaction analysis.**
- Confident selection and optimization of lead compounds during drug discovery—label-free screening and characterization.
- Reduce costs in biotherapeutic development—early kinetic screening of hybridomas for mAb selection.
- Optimize safety and efficacy—define serum antibody responses in immunogenicity studies and immunotherapeutic development.
- Perform large scale functionality studies—high quality, high information-content interaction studies in proteomics.
- 21 CFR Part 11 compliant.

Please contact your GE Healthcare representative for more information about Biacore A100.

Related Products	Code Number	Refer To
Series S Sensor Chips		page 246
Amine Coupling Kit, type 2 for Biacore A100 and S51, 60-80 immobilizations	BR-1006-33	page 251
Reagents, Buffers and Solutions		page 251
Biacore Maintenance Kit, type 2	BR-1006-51	page 251

Biacore T100



Biacore T100 is a system for comprehensive protein interaction analysis from early research, to drug discovery and development and on to QC.

- **One platform for high-quality comprehensive characterization - kinetics, affinity, specificity, concentration and thermodynamics.**
- Confident selection and characterization of therapeutic candidates.
- Define potential drug targets and diagnostic markers.
- Optimize safety and efficacy—detect and characterize serum antibody response in immunogenicity studies and immunotherapeutic development.
- Increase understanding of molecular mechanism, structure-function relationships and interaction profiles.

Please contact your GE Healthcare representative for more information about Biacore T100.

Related Products	Code Number	Refer To
Series S Sensor Chips		page 249
Amine Coupling Kit for 30–50 immobilizations	BR-1000-50	page 251
Reagents, Buffers and Solutions		page 251
Biacore Maintenance Kit, type 2	BR-1006-51	page 251

Biacore Flexchip



Biacore Flexchip enables array-based comparative profiling with up to 400 biomolecules immobilized in a single flow cell.

- **Profile and compare hundreds of interactions in parallel and in real time without labeling.**
- Select interactions of interest for downstream characterization.
- Map biomolecular interaction networks and understand their functions.
- Define epitopes and discover new biomarkers.
- Get more and new information in less time compared to classical assay formats.
- Immobilize material such as proteins, peptides, nucleic acids, and carbohydrates, and see the interactions with agents such as proteins, viruses, bacteria and mammalian cells.

Please contact your GE Healthcare representative for more information about Biacore Flexchip.

Related Products	Refer To
Biacore Flexchip Affinity Chips	page 251

Biacore X100



Biacore X100 is a ready-to-run research system designed for multiproject, multi-user environments.

- **Understand molecular mechanisms and interaction pathways.**
- Get up and running with label free interaction analysis in one day.
- Add function to structure.
- Select research tools, diagnostics and therapeutics.
- Simple, robust and versatile operation.
- Processes up to 15 samples per automated run.

Please contact your GE Healthcare representative for more information about Biacore X100.

Related Products	Code Number	Refer To
Series S Sensor Chips		page 249
Amine Coupling Kit for 30–50 immobilizations	BR-1000-50	page 251
Human Antibody Capture Kit	BR-1008-39	page 251
Mouse Antibody Capture Kit	BR-1008-38	page 251
Reagents, Buffers and Solutions		page 251
BIaintenance Kit	BR-1006-66	page 251

Biacore C



Biacore C is a dedicated system designed for rapid determination of concentration in GxP environments—from preclinical development to QC.

- **Determine concentrations of protein therapeutics and vaccines.**
- Protein quantitation within bioprocess development and analytical labs.
- Quality control and stability studies in protein manufacturing.
- Biopharmaceutical release testing.
- 21 CFR Part 11 compliant.

Related Products	Code Number	Refer To
Series S Sensor Chips		page 249
Amine Coupling Kit for 30–50 immobilizations	BR-1000-50	page 251
Reagents, Buffers and Solutions		page 251
Biacore Maintenance Kit	BR-1006-67	page 251

Biacore 3000









Biacore 3000 provides interaction analysis with an SPR-MALDI interface.

- **Recover and characterize interaction partners using a MALDI-MS interface.**
- Elucidate disease mechanisms by characterizing native or recombinant protein interactions.
- Define potential drug targets or diagnostic markers.

Related Products	Code Number	Refer To
Series S Sensor Chips		page 249
Amine Coupling Kit for 30–50 immobilizations	BR-1000-50	page 251
Reagents, Buffers and Solutions		page 251
BIAmaintenance Kit	BR-1006-66	page 251

Which system is right for you?

Choosing the optimum system is not just a matter of looking at specifications. Biacore systems have been developed and designed to suit the many different ways in which label-free interaction analysis contributes to research, drug discovery and development, manufacturing and quality control. The table below may be used as a preliminary guide in choosing the right system. Contact your local representative for more information.

Application/performance and technical specifications						
	Biacore T100	Biacore A100	Biacore Flexchip	Biacore X100	Biacore 3000	Biacore C
						
Application						
Kinetic/affinity characterization	•••	•••	•	••	••	-
Kinetic/affinity screening & profiling	••	•••	•••	•	••	-
Single cycle kinetics	Yes	-	-	Plus Package	-	-
Concentration measurement	••	••	-	Plus Package	•	•••
LMW interaction analysis	•••	•••	-	-	•	-
Thermodynamic characterization	•••	•	-	•	•	-
Sample recovery for MS	••	-	-	-	•••	-
Performance and technical specifications						
Detection spots/sensor surface	4	20	400	2	4	4
Throughput	••	•••	•••	•	•••	•
Unattended run capacity	••	•••	•	•	••	••
Automated data evaluation	••	•••	••	••	•	•••
User guidance	••	••	••	•••	••	••
Cooled sample storage	•••	•••	-	-	••	••
Analysis temperature (°C)	4-45 (in-line degasser)	4-40 (in-line degasser)	20-37 (in-line degasser)	25 4-40 with Plus Package, (including degasser)	4-40	25
GxP compliance support	GxP Package	GxP Package	-	-	GxP Package	Yes

Introduction to Biacore Sensor Chips

To study an interaction, one of the interaction partners is immobilized onto the sensor surface of a sensor chip. Immobilization occurs by direct coupling to the surface or via a capturing molecule.

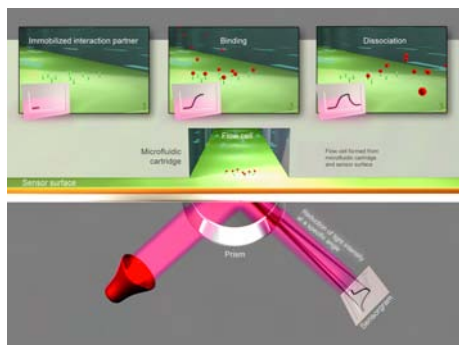
Interactions are monitored by injecting samples over the prepared sensor surface. Where appropriate, the sensor surface may be regenerated between injections by selective dissociation of the interaction partners. Regeneration solutions ensure complete dissociation, without affecting the binding characteristics of the immobilized partner.

A range of sensor chips ensures that the most suitable sensor surface can be chosen according to the nature of the molecule to be coupled and the requirements of the analysis. The surface concentration of the immobilized interaction partner may be varied according to the type of analysis. In general, concentration and specificity assays require a high surface concentration, while lower concentrations are preferable for kinetic analysis.

Sensor chips are available in three instrument-related formats. Series S Sensor chips are used in Biacore A100, Biacore T100, and Biacore S51, while the classic format fits with all other Biacore systems except for Biacore Flexchip, which is used with Affinity Chips. Please ensure that you order the correct format for your system.

Certified sensor chips are suitable also for use in regulated environments. All Series S chips are Certified.

For more information, please visit www.gelifesciences.com/biacore



Real-time interaction analysis utilizes the phenomenon of surface plasmon resonance.

Sensor chips are available in three instrument-related formats. Please ensure that you order the correct format for your system.

SELECTION GUIDE—Biacore Sensor Chip Surfaces				
Molecule to be immobilized	CM5	CM4	CM3	C1
Proteins	● The first choice for immobilization of proteins via -NH ₂ , -SH, -CHO, -OH, -COOH	○ Useful if contaminants have a high positive charge	○ If partner in solution is very large e.g. a molecular complex	○ If partner in solution is multivalent or very large e.g. a molecular complex
Tagged proteins	● For GST-tags (surface is derivatized with anti-GST antibody)	●		
LMW molecules, typically < 1000 Da	●	○	○	
Membrane-associated molecules				
Nucleic acids	● When modified with an amine group	○ Useful if contaminants have a high positive charge	○ If partner in solution is very large e.g. a molecular complex	○ If partner in solution is multivalent or very large e.g. a molecular complex
Carbohydrates	● When modified with an aldehyde group	○ Useful if contaminants have a high positive charge	○ If partner in solution is very large e.g. a molecular complex	○ If partner in solution is multivalent or very large e.g. a molecular complex
Viruses or intact cells			● Keep large particles close to the surface to maintain sensitivity	● Keep large particles close to the surface to maintain sensitivity

Recommendations in this table are based on the experience of scientists who have studied thousands of different interactions since the first Biacore system was introduced.
● = Recommended choice; ○ = Good alternative

Introduction to Biacore Sensor Chips (continued)

SELECTION GUIDE–Biacore Sensor Chip Surfaces (cont'd)				
Molecule to be immobilized	Sensor Chip SA	HPA	L1	NTA
Proteins	• When biotinylated			
Tagged proteins				• For histidine-tags
LMW molecules, typically < 1000 Da				
Membrane-associated molecules		• Incorporate molecule into a lipid monolayer	• Incorporate molecule into a lipid monolayer	
Nucleic acids	• When biotinylated			
Carbohydrates	• When biotinylated			
Viruses or intact cells				

Recommendations in this table are based on the experience of scientists who have studied thousands of different interactions since the first Biacore system was introduced.
• = Recommended choice

Sensor Chip CM5

- Use for immobilization via $-NH_2$, $-SH$, $-CHO$, $-OH$, or $-COOH$ groups.
- Highly versatile chip.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip CM5 (certified)	3	BR-1000-12
Sensor Chip CM5 (research grade)	3	BR-1000-14
Sensor Chip CM5 (research grade)	1	BR-1003-99

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip CM4

- Use when sample contaminants have a high positive charge.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip CM4	3	BR-1005-39

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip CM3

- Use when the interactions partner in solution is very large.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip CM3	3	BR-1005-41

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip C1

- Use when the interaction partner in solution is multivalent or very large.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip C1	3	BR-1005-40

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip NTA

- Use for immobilization of histidine-tagged molecules.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip NTA	3	BR-1000-34
Sensor Chip NTA	1	BR-1004-07

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip SA

- Use for immobilization of biotinylated peptides, proteins, nucleic acids, or carbohydrates.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip SA	3	BR-1000-32
Sensor Chip SA	1	BR-1003-98

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip L1

- Use to incorporate a molecule into a lipid bilayer.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip L1	3	BR-1005-43
Sensor Chip L1	1	BR-1005-58

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip HPA

- Use when working with model membrane systems.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip HPA	3	BR-1000-30
Sensor Chip HPA	1	BR-1004-06

For pricing information, visit www.gelifesciences.com/orderonline

Sensor Chip Au

- Untreated gold surface for use with a wide variety of coating techniques.

ORDERING INFORMATION		
Product	Quantity	Code Number
Sensor Chip Au	3	BR-1005-42

For pricing information, visit www.gelifesciences.com/orderonline

SIA Kit Au



- Contains unmounted gold surfaces and separate chip supports for easy assembly after surface coating. This allows the use of a wide variety of coating techniques, including those using harsh conditions that the chip carrier would not withstand.
- Series S format is recommended for use with Biacore T100 only.

ORDERING INFORMATION		
Product	Quantity	Code Number
SIA Kit Au	1	BR-1004-05

Includes: 10 sensor surfaces Au, 16 adhesive strips, and for each format 10 sensor chip supports, 1 protective sheath, and 1 assembly unit.

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip CM5

- Use for immobilization via $-NH_2$, $-SH$, $-CHO$, $-OH$, or $-COOH$ groups.
- Highly versatile chip.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip CM5 (certified)	3	BR-1005-30
Series S Sensor Chip CM5	3	BR-1006-68

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip CM4

- Use when sample contaminants have a high positive charge.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip CM4 (certified)	3	BR-1005-34

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip CM3

- Use when the interaction partner in solution is very large.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip CM3 (certified)	3	BR-1005-36

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip C1

- Use when the interaction partner in solution is multivalent or very large.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip C1 (certified)	3	BR-1005-35

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip NTA

- Designed for immobilization of histidine-tagged molecules.
- Format compatible with Biacore S51, but no system support available for use in this system.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip NTA (certified)	3	BR-1005-32

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip SA

- Use for immobilization of biotinylated peptides, proteins, nucleic acids, or carbohydrates.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip SA (certified)	3	BR-1005-31

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip L1

- Use to incorporate a molecule into a lipid bilayer.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip L1 (certified)	3	BR-1005-38

For pricing information, visit www.gelifesciences.com/orderonline

Series S Sensor Chip HPA

- Use when working with model membrane systems.
- Format compatible with Biacore S51, but no system support available for use in this system.

ORDERING INFORMATION		
Product	Quantity	Code Number
Series S Sensor Chip HPA (certified)	3	BR-1005-33

For pricing information, visit www.gelifesciences.com/orderonline

Gold Affinity Chip Set

- *Unmodified gold-coated chips.*

ORDERING INFORMATION		
Product	Quantity	Code Number
Gold Affinity Chip Set <i>Includes chips and pregasketed windows.</i>	4	BR-1007-00

For pricing information, visit www.gelifesciences.com/orderonline

NeutrAvidin Affinity Chip Set

- *Chips designed for spotting biotinylated materials that bind to NeutrAvidin.*

ORDERING INFORMATION		
Product	Quantity	Code Number
NeutrAvidin Affinity Chip Set <i>Includes chips and pregasketed windows.</i>	4	BR-1007-13

For pricing information, visit www.gelifesciences.com/orderonline

Protein A/G Affinity Chip Set

- *Chips designed for spotting antibodies or other materials that bind to protein A or protein G.*

ORDERING INFORMATION		
Product	Quantity	Code Number
Protein A/G Affinity Chip Set <i>Includes chips and pregasketed windows.</i>	4	BR-1007-12

For pricing information, visit www.gelifesciences.com/orderonline

Streptavidin Affinity Chip Set

- *Chips designed for spotting biotinylated materials that bind to streptavidin.*

ORDERING INFORMATION		
Product	Quantity	Code Number
Streptavidin Affinity Chip Set <i>Includes chips and pregasketed windows.</i>	4	BR-1007-02

For pricing information, visit www.gelifesciences.com/orderonline

Reagents, Buffers, and Solutions

Biacore reagents, buffers and solutions are high quality products for optimal convenience, with verified function and performance in Biacore systems.

ORDERING INFORMATION		
Product	Quantity	Code Number
Immobilization Reagents		
Amine Coupling Kit for 30–50 immobilizations	1	BR-1000-50
Amine Coupling Kit, type 2 for Biacore A100 and S51, 60–80 immobilizations	1	BR-1006-33
Thiol Coupling Kit	1	BR-1005-57
PDEA Thiol Coupling Reagent*	100 mg	BR-1000-58
Acetate 4.0	50 ml	BR-1003-49
Acetate 4.5	50 ml	BR-1003-50
Acetate 5.0	50 ml	BR-1003-51
Acetate 5.5	50 ml	BR-1003-52
Borate 8.5	50 ml	BR-1003-53
Biacore Flexchip Blocking Buffer 10×	250 ml	BR-1007-08
Capture Reagents		
GST Capture Kit*	1	BR-1002-23
Mouse Antibody Capture Kit*	1	BR-1008-38
Human Antibody Capture Kit*	1	BR-1008-39
Regeneration Solutions		
Regeneration Scouting Kit	1	BR-1005-56
Glycine 1.5	100 ml	BR-1003-54
Glycine 2.0	100 ml	BR-1003-55
Glycine 2.5	100 ml	BR-1003-56
Glycine 3.0	100 ml	BR-1003-57
NaOH 50	100 ml	BR-1003-58
Running Buffers for all systems except Biacore X100, Biacore A100, Biacore T100, Biacore S51, and Biacore Flexchip		
HBS-EP	6 × 200 ml	BR-1001-88
HBS-P	6 × 200 ml	BR-1003-68
HBS-N	6 × 200 ml	BR-1003-69
Running Buffers for Biacore X100, Biacore A100, and Biacore T100		
HBS-EP+ 10×	1000 ml	BR-1006-69
HBS-EP+ 10×	4 × 50 ml	BR-1008-26
HBS-P+ 10×	1000 ml	BR-1006-71
HBS-P+ 10×	4 × 50 ml	BR-1008-27
HBS-N 10×	1000 ml	BR-1006-70
HBS-N 10×	4 × 50 ml	BR-1008-28
Running buffer for all systems except Biacore Flexchip		
PBS 10×	1000 ml	BR-1006-72
Additives		
NSB Reducer	10 ml	BR-1006-91
Surfactant P20	20 ml	BR-1000-54
Maintenance Kits		
BIAmaintenance Kit (for Biacore X100, Biacore 3000, Biacore 2000, Biacore 1000, Biacore Upgrade, Biacore X, and Biacore J)	1	BR-1006-66
Biacore Maintenance Kit (for Biacore C)	1	BR-1006-67
Biacore Maintenance Kit, type 2 (for Biacore A100, Biacore T100, and Biacore S51)	1	BR-1006-51
Desorb Kit	1	BR-1008-23
Biacore Flexchip Test Solution Kit	1	BR-1007-24
Biacore Flexchip Startup Kit	1	BR-1007-03

For pricing information, visit www.gelifesciences.com/orderonline

* The use of these products in Biacore systems requires an Amine Coupling Kit with Sensor Chip CM5, CM4, CM3, or C1.

For more information, please visit www.gelifesciences.com/biacore

Accessories

SELECTION GUIDE—Racks, vials and caps													
Product	System Compatibility								Code Number	Number of Vials in Rack × ø	Vial Type	Cap Type	Page
	Biacore T100	Biacore X100	Biacore S51	Biacore C	Biacore 3000	Biacore 2000	Biacore 1000	Biacore					
Reagent Rack, type 1	•		•						BR-1004-81	20 × 11 mm	BR-1002-87	BR-1004-11	this page
Reagent Rack, type 2	•		•						BR-1004-82	9 × 16 mm 24 × 7 mm	BR-1002-09 BR-1002-12	BR-1004-11 BR-1005-02	this page
Sample and Reagent Rack, type 1	•								BR-1006-53	45 × 7 mm 24 × 11 mm 9 × 16 mm	BR-1002-12 BR-1002-87 BR-1006-54 or BR-1002-09	BR-1005-02 BR-1004-11 BR-1006-55 BR-1004-11	this page
Thermo Rack A					•	•	•	•	BR-1001-36	5 × 16 mm 12 × 9 mm 40 × 7 mm	BR-1002-09 BR-1002-07 BR-1002-12	BR-1002-11 or BR-1002-86 BR-1002-08 or BR-1005-55 BR-1002-13 or BR-1005-55	this page
Thermo Rack B					•	•	•	•	BR-1001-37	60 × 9 mm	BR-1002-07	BR-1002-08 or BR-1005-55	this page
Thermo Rack C					•	•	•	•	BR-1001-38	24 × 11 mm	BR-1002-14 or BR-1002-87	BR-1002-86	this page
Thermo Rack F				•					BR-1003-36	6 × 16 mm 18 × 11 mm	BR-1002-09 BR-1002-14 or BR-1002-87	BR-1004-11 BR-1004-11	this page
Reagent Rack A					•				BR-1003-80	4 × 16 mm 4 × 11 mm	BR-1002-09 BR-1002-14 or BR-1002-87	BR-1002-11 or BR-1002-86 BR-1002-86	this page
Reagent Rack B				•					BR-1004-12	6 × 16 mm 1 × 11 mm 2 × 7 mm	BR-1002-09 BR-1002-14 or BR-1002-87 BR-1002-12	BR-1004-11 BR-1004-11 BR-1005-02	this page
Reagent Rack C				•					BR-1004-13	20 × 7 mm	BR-1002-12	BR-1005-02	this page
Biacore X100 Sample and Reagent Rack		•							BR-1007-99	15 × 11 mm 1 × 15 mm	BR-1002-87 BR-1006-54	BR-1004-11 No cap	this page this page

Biacore A100 - racks and caps are not required. Biacore X, Biacore J, and BIAlite - use any of the vials and caps listed. Biacore Flexchip - use only BR-1007-06 Biacore Flexchip Sample Vials.

ORDERING INFORMATION		
Product	Quantity	Code Number
Reagent Rack, type 1	1 rack	BR-1004-81
Reagent Rack, type 2	1 rack	BR-1004-82
Sample and Reagent Rack, type 1	1 rack	BR-1006-53
Thermo Rack A	1 rack	BR-1001-36
Thermo Rack B	1 rack	BR-1001-37
Thermo Rack C	1 rack	BR-1001-38
Thermo Rack F	1 rack	BR-1003-36
Reagent Rack A	1 rack	BR-1003-80
Reagent Rack B	1 rack	BR-1004-12
Reagent Rack C	1 rack	BR-1004-13
Biacore X100 Sample and Reagent Rack	1 rack	BR-1007-99*

For pricing information, visit www.gelifesciences.com/orderonline

* Availability varies by region - please contact your local GE Healthcare office for details.

ORDERING INFORMATION		
Product	Quantity	Code Number
Vials		
Glass Vials, ø 9 mm	600 vials	BR-1002-07
Autosampler vial kit ø 9 mm	50 vials, crimp caps, and septa	BR-1000-11
Glass Vials, ø 16 mm	500 vials	BR-1002-09
Plastic Vials, ø 7 mm	1000 vials	BR-1002-12
Plastic Vials, ø 11 mm	500 vials	BR-1002-87
Plastic Vials, ø 15 mm	1000 vials	BR-1006-54
Plastic Vials and Caps ø 11 mm	500 vials and caps	BR-1002-14
Flexchip Sample Vials	25 vials	BR-1007-06
Caps		
Crimp caps and Septa, 9 mm	500 caps and septa	BR-1002-08
Caps and Septa, 16 mm	500 caps and septa	BR-1002-11
Caps, 16 mm	500 caps	BR-1002-10
Caps, 7 mm	1000 caps	BR-1002-13
Rubber Caps	400 caps	BR-1002-86
Rubber Caps, type 2	400 caps	BR-1004-11
Rubber Caps, type 3	600 caps	BR-1005-02
Rubber Caps, type 4	600 caps	BR-1005-55
Rubber Caps, type 5	400 caps	BR-1006-55

For pricing information, visit www.gelifesciences.com/orderonline

Accessories (continued)

SELECTION GUIDE—Accessories and Replacement Parts		System Compatibility										
Product	Description	Biacore Flexchip	Biacore A100	Biacore T100	Biacore X100	Biacore S51	Biacore C	Biacore 3000	Biacore 2000	Biacore 1000	Biacore J	Biacore X
Microplate 384-well	100 × polystyrene microplates		•	•		•						
Microplate Foil (384-well)	100 × self-adhesive, transparent plastic foils		•	•		•						
Microplate 96-well	100 × polystyrene microplates		•	•		•	•	•	•	•		
Microplate Foil (96-well)	100 × self-adhesive, transparent plastic foils		•	•		•	•	•	•	•		
96-well Microplates and Foil	50 × polystyrene microplates and aluminum foils						•	•	•	•		
Microplate Cover	Cover used with aluminum foils to shield light-sensitive samples in microplates						•	•	•	•		
Reagent Plate and Foil	100 × 24-well disposable reagent plates with self-adhesive, transparent plastic foils		•									
Rack Tray	Tray for holding reagent rack and microplate			•		•						
Rack Tray, type 3	Tray for holding reagent rack and microplate		•									
Chip Assembly Tool	Used to affix a pre-gasketed window to an affinity chip to create a flow cell	•										
Bottle, 1000 ml, BR-1007-07	High-density polyethylene (HDPE) bottle for holding buffers	•										
Bottle, 2000 ml	Borosilicate screw top glass bottle and polypropylene screw cap with GL 45 thread. Use for holding buffer or waste			•		•						
Bottle, 1000 ml, BR-1004-84	As above		•	•		•						
Bottle, 500 ml	As above			•	•		•	•	•	•		
Bottle, 250 ml	As above			•		•						
Bottle Cap Assembly	Polypropylene screw cap adapted for tubing insertion. For use with Bottle, 500 ml BR-1000-92						•	•	•	•		
Tool Kit	Tools for instrument maintenance. Required for removal of covers						•	•	•	•	•	•
Series S Tool Kit	Tools for instrument maintenance. Required for removal of covers			•		•						
Tool Kit, type 3	Tools for instrument maintenance. Required for removal of covers		•									
External Connector, Temperature Control	Inlet and outlet connectors for external cooling water						•	•	•	•		
Compressor 115 V	Compressor providing air supply											•
Compressor 220 V	Compressor providing air supply											•
Connector Block, type 3	For connection between injection part and IFC type 5 with built-in injection port											•
Connector Block, type 4	For connection between autosampler and IFC type 6 and type 4. Includes injection port						•	•				
Connector Block, type 5	For connection between injection port and IFC type 7. Includes injection port										•	
Recovery Block	For connection between autosampler and IFC type 3 and 4. Includes injection port and 350 µl recovery cup								•	•		
Injection Port	Replacement injection port for use in BR-1002-34 Recovery Block and BR-1003-40 Connector Block						•	•	•	•		
Injection Port, type 2	Injection port for 200 µl pipette tips										•	
Injection Port, type 3	Injection port for 1000 µl pipette tips										•	
Peristaltic Pump Tubing Kit BR-1003-94	2 × tube sets (tubing with connectors)										•	
Peristaltic Pump Tubing Kit BR-1007-23	Tube set	•										

Accessories (continued)

SELECTION GUIDE—Accessories and Replacement Parts (cont'd)		System Compatibility										
Product	Description	Biacore Flexchip	Biacore A100	Biacore T100	Biacore X100	Biacore S51	Biacore C	Biacore 3000	Biacore 2000	Biacore 1000	Biacore J	Biacore X
Flow Cell Carrier, type 1	Flow cell for Surface Prep unit. For 4 individual flow cells							•				
Injection Block, type 1	Injection block for Surface Prep unit. For connection between autosampler and Flow Cell Carrier, type 1							•				
Flow Cell Carrier, type 2	Flow cell for Surface Prep unit forming one large flow cell							•				
Injection Block, type 2	Injection block for Surface Prep unit. For connection between autosampler and Flow Cell Carrier, type 2							•				
Injection Needle	Stainless steel needle for autosampler							•	•	•		
Injection Needle, type 2	Stainless steel needle for autosampler				•	•						
Autosampler Tubing	Tefzel tube					•	•	•	•			
PEEK Ferrule	10 × ferrules for flangeless connection of PEEK tubing					•	•	•	•			•
PEEK Nut	2 × nuts for connecting PEEK tubing					•	•	•	•			•
Syringe, 500 µl	Complete glass syringe and plunger for pumps				•	•	•	•	•			•
Plunger	Spare plunger for syringe, 500 µl				•	•	•	•	•			•
Syringe Maintenance Kit	Replacement parts for syringe (includes pump seal and o-ring)				•	•	•	•	•			•

ORDERING INFORMATION		
Product	Quantity	Code Number
Miscellaneous Accessories		
Microplate 384-well	100 plates	BR-1005-05
Microplate Foil (384 well)	100 foils	BR-1005-77
Microplate 96-well	100 plates	BR-1005-03
Microplate Foil (96 well)	100 foils	BR-1005-78
96-well Microplates and Foils	50 plates and foils	BR-1003-83
Microplate Cover	1 cover	BR-1004-20
Reagent Plate and Foil	100 (10 × 10) plates with foils	BR-1006-08
Rack Tray	1 tray	BR-1004-83
Rack Tray, Type 3	1 tray	BR-1006-09
Chip Assembly Tool	1 tool	BR-1007-09
Bottle, 1000 ml	1	BR-1007-07
Bottle, 2000 ml	1 bottle with screw cap	BR-1004-88
Bottle, 1000 ml	1 bottle with screw cap	BR-1004-84
Bottle, 500 ml	1 bottle with screw cap	BR-1000-92
Bottle, 250 ml	1 bottle with screw cap	BR-1004-80
Bottle Cap Assembly	1	BR-1000-93
Tool Kit	1 kit	BR-1001-43
Series S Tool Kit	1 kit	BR-1004-94
Tool Kit, Type 3	1 kit	BR-1006-87
External Connector, Temperature Control	1 pair	BR-1000-65
Compressor, 115 VAC	1 unit	BR-1002-18
Compressor, 220 VAC	1 unit	BR-1002-19*

ORDERING INFORMATION		
Product	Quantity	Code Number
Connector Block, Type 3	1	BR-1002-78
Connector Block, Type 4	1	BR-1003-40
Connector Block, Type 5	1	BR-1003-92*
Recovery Block	1	BR-1002-34
Injection Port	1	BR-1001-67
Injection Port, Type 2	1	BR-1003-95*
Injection Port, Type 3	1	BR-1003-96*
Peristaltic Pump Tubing Kit	2 tube sets	BR-1003-94*
Peristaltic Pump Tubing Kit	2 tube sets	BR-1007-23
Flow Cell Carrier, Type 1	1	BR-1004-23
Injection Block, Type 1	1	BR-1004-24
Flow Cell Carrier, Type 2	1	BR-1005-72
Injection Block, Type 2	1	BR-1005-73
Injection Needle	1	BR-1001-70
Injection Needle, Type 2	1	BR-1003-41
Autosampler Tubing	1	BR-1001-30
PEEK Ferrule	10	BR-1002-60
PEEK Nut	2	BR-1002-61
Syringe, 500 µl	1	BR-1000-84
Plunger	1	BR-1001-96
Syringe Maintenance Kit	2	BR-1000-89

For pricing information, visit www.gelifesciences.com/orderonline

* Availability varies by region - please contact your local GE Healthcare office for details.

For pricing information, visit www.gelifesciences.com/orderonline

Get the most out of label-free interaction analysis

Our goal is to provide you with the optimum level of support so that your Biacore system continues to make a key contribution to your work. In addition to dedicated field support from our application scientists and service engineers, a comprehensive range of support tools and information services is available on www.gelifesciences.com/biacore.

Instrument service

Starting with installation, dedicated service engineers will provide you with quality service to maintain long-term, trouble-free performance of your system.

- Service contracts and Extended Warranty Options are available for cost control and priority service.
- Preventive maintenance visits ensure your system is in excellent working condition and performs according to specifications.

Validation support

For our 21CFR Part 11 compliant systems* used in GLP/GMP/GCP environments we offer validation and qualification services including

- GxP documentation.
- GxP Services with IQ/OQ/IPQ performed on-site.

Equipment qualification is performed by GxP-trained, qualified service engineers when the system is installed in its selected operating environment.

* See Biacore System Selection table on page 245 for information on 21 CFR Part 11 compliant systems.

Training

A range of courses and train-yourself tools is available to ensure that you get the most out of your protein interaction analyses.

- E-learning courses on our website provide learning opportunities whenever it is suitable for you.
- System-specific train-yourself tools familiarize you with your Biacore system.
- Class room training in small groups allows for individual support from our experienced lecturers.
- On-site training may be provided upon request.

Application support

Our experienced application specialists offer customized support to answer your specific questions:

- Personal advice on assay setup and assay development.
- Help with troubleshooting.

Support tools on website

- Tech tips & protocols.
- BIA simulation software for dry-run experiments.
- Interactive Tutorial: learn how to setup, run and evaluate Biacore analyses.
- Immobilization and regeneration database for experimental tips.
- Download section:
 - Latest software version.
 - Handbooks and product-specific material.
 - Latest news about your system.