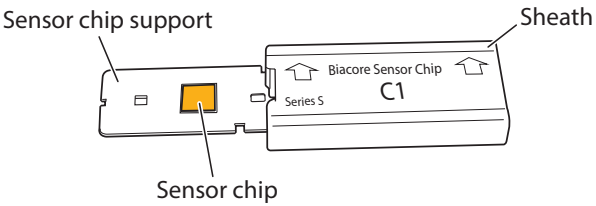
Series S Sensor Chip C1

Instructions for Use

Product description

Order code:	BR-1005-35 (package of three sensor chips) 29104944 (package of one sensor chip)
Storage:	The use-before date applies to chips stored at +2 to 8°C in unopened pouches.



The sensor chip is fixed to a polystyrene support sheath. Each cassette, consisting of a sensor chip and sheath assembly, is individually packed under a nitrogen atmosphere in a sealed pouch.

Note: *For in vitro use only.*

Application areas

Series S Sensor Chip C1 is designed for interaction analysis in Biacore™ systems. The surface is flat and carboxymethylated with no dextran matrix (the carboxyl groups are attached directly to the surface layer), which may be an advantage when there is a need to avoid dextran.

Ligands can be attached via covalent coupling using well-established chemistries. Alternatively, a capturing molecule may be coupled for subsequent ligand capture. The immobilization level is typically around 10% of that obtained on Sensor Chip CM5 under comparable conditions. Series S Sensor Chip C1 is less hydrophilic than Sensor Chip CM5, which may result in increased non-specific binding for some samples.

Refer to *cytiva.com/biacore* for updates on applications and scientific publications.

Preparations for use

Step	Action
1	If you are working in a humid environment, allow the sealed sensor chip pouch to equilibrate at room temperature for 15 to 30 minutes in order to prevent condensation on the chip surface.
2	Prepare the Biacore instrument with running buffer. The buffer should be filtered (0.22 µm), and degassed for systems that do not have an integrated buffer degasser.
3	Open the sensor chip pouch. Make sure that the sensor chip support remains fully inserted into the sheath at all times to protect the chip from dust particles.
4	Dock the sensor chip in the instrument as described in the instrument handbook. ***Note:*** *Sensor chips that are not docked in the instrument should be stored in closed containers.*
5	Before immobilizing your molecule, wash the surface with two one-minute injections of freshly prepared 0.1 M glycine-NaOH, pH 12 containing 0.3% Triton X-100, followed by ***Extra clean***/***Extra wash*** and then run ***Prime*** using running buffer.

Immobilizing the ligand

The ligand or capturing molecule is covalently bound to the sensor chip surface via carboxyl groups on the sensor chip. Functional groups on the molecule that can be used for coupling include -NH_2, -SH, -CHO, -OH, and -COOH.

Refer to *Biacore Sensor Surface Handbook* for more information on immobilization strategies and procedures.

Interaction analysis

Interaction analysis is performed by injection of samples over the sensor chip surface.

The slightly hydrophobic character of the Series S Sensor Chip C1 surface can lead to non-specific binding of material to the surface from some samples (particularly complex samples such as serum or cell extracts). Non-specific binding may in some cases be successfully counteracted by coating the surface with an injection of serum albumin or other protein that does not interact with the analyte (recommended 0.2 mg/ml in running buffer) prior to analysis.

Refer to Biacore handbooks and *cytiva.com/biacore* for details on experimental protocols and methodology.

Regeneration

Regeneration of the immobilized ligand may be performed by selective dissociation of the bound analyte. Conditions should be chosen to achieve complete dissociation of the analyte without affecting the binding characteristics of the ligand. The surface of Series S Sensor Chip C1 is resistant to a wide range of agents for this purpose (for more information see the *Chemical resistance* section below). The choice of regeneration procedure may be limited by the stability of the ligand.

Refer to *Biacore Sensor Surface Handbook* for more detailed information on regeneration strategies.

Chemical resistance

The surface of Series S Sensor Chip C1 is resistant to 1-minute pulses of many commonly used agents.

Agent	Concentration
Acetonitrile	30%
DMSO	10%
DTE	0.1 M

Agent	Concentration
EDTA	0.35 M
Ethanol	70%
Ethanolamine	1 M
Ethylene glycol	100%
Formamide	40%
Formic acid	20%
Glycine pH 1.5 to 3.0	100 mM
HCl	100 mM
Imidazole	300 mM
$MgCl_2$	4 M
NaOH	100 mM
NaCl	5 M
SDS	0.5%
Surfactant P20	5%
Urea	8 M

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