

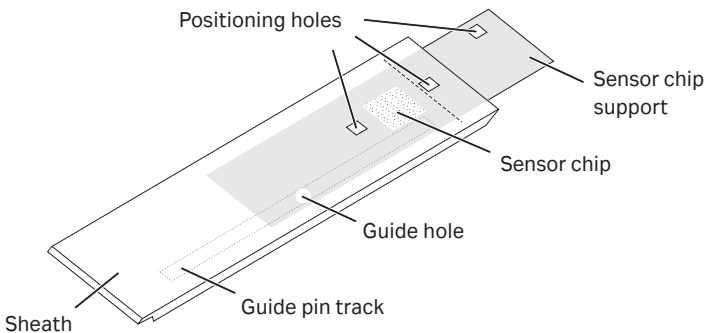
Sensor Chip C1

Instructions for Use

Product description

Product code: BR100540 (package of three sensor chips)

Storage: The use-before date applies to sensor chips stored at +2°C 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 packed in a separate pouch and sealed under a nitrogen atmosphere.

Note: For *in vitro* use only.

Application areas

Sensor Chip C1 is designed for interaction analysis in Biacore™ systems. The surface is flat and carboxymethylated without 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.

Sensor Chip C1 is less hydrophilic than Sensor Chip CM5, which may result in increased non-specific binding for some samples.

For updates on applications and scientific publications, refer to cytiva.com/biacore.

Preparation of the conditioning solution

Prepare the following conditioning solution for immobilization on Sensor Chip C1:

Conditioning solution (0.1 M glycine-NaOH, 0.3% Triton X-100, pH 12, 200 mL)

	Final concentration	Add:
Ultrapure water		150 ml
Glycine	0.1 M	1.5 g
Triton X-100	0.3%	600 µL
NaOH, 4 M		adjust to pH 12.0
Ultrapure water		to 200 mL
Store solution in a plastic flask and use within 2 months.		

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 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.

Step	Action
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 against dust particles.
4	Dock the sensor chip in the instrument as described in the instrument handbook. Note: <i>Store undocked sensor chips in closed containers.</i>
5	Before immobilizing your molecule, condition the surface with two one-minute injections of freshly prepared conditioning solution, then run Prime or Extra clean/Extra wash using running buffer.

Immobilizing the ligand

The ligand or capturing molecule is covalently bound to the sensor chip surface via carboxyl groups on the surface. Functional groups on the molecule that can be used for coupling include -NH₂, -SH, -CHO, -OH, and -COOH.

For more information on immobilization strategies and procedures, refer to *Biacore Sensor Surface Handbook (BR100571)*.

Interaction analysis

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

The slightly hydrophobic character of the 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 (recommended 0.2 mg/ml in running buffer) prior to analysis.

For details on experimental protocols and methodology, refer to Biacore handbooks and cytiva.com/biacore.

Regenerating the surface

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 Sensor Chip C1 is resistant to a wide range of agents for this purpose (for more information see the following chapter). The choice of regeneration procedure may be limited by the stability of the ligand.

For more information on regeneration strategies, refer to *Biacore Sensor Surface Handbook (BR100571)*.

Chemical resistance

The surface of Sensor Chip C1 is resistant to one-minute pulses of many commonly used agents. For information on resistance to common agents compatible with Sensor Chip C1, see table below.

Agent	Concentration
Acetonitrile	30%
DMSO	10%
DTE	0.1 M
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
Octyl glucoside	40 mM
SDS	0.5%
Surfactant P20	5%
Urea	8 M

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