GE Healthcare

Instructions 28-9578-66 AA

Series S Sensor Chip CM7

Product description

Order code:	28-9538-28 (Package of one sensor chip)
Contents:	Series S Sensor Chip CM7
Storage:	The use-before date applies to chips stored at +4-8°C in unopened pouches

For *in vitro* use only.

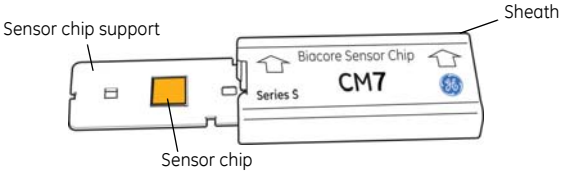


Fig 1. The sensor chip is fixed to a polystyrene support frame in a protective sheath. Each cassette, consisting of a sensor chip and sheath assembly, is individually packed under a nitrogen atmosphere in a hermetically sealed pouch.

Biacore

Application areas

Sensor Chip CM7 is intended for interaction analysis in Biacore™ systems. The surface has a carboxymethylated dextran matrix covalently attached to a gold film, with similar chemical properties to Sensor Chip CM5 but prepared to provide a higher immobilization capacity.

Sensor Chip CM7 is designed primarily for work with low molecular weight analytes. With macromolecular analytes, the analyte binding capacity (R_{max}) is lower than expected on the basis of the amount of ligand immobilized, possibly because of multi-site attachment of the ligand and matrix crosslinking on the higher capacity surface.

Refer to www.gelifesciences.com/biacore for updates on applications and scientific publications.

Preparations for use

- If you are working in a humid environment, allow the sealed sensor chip pouch to equilibrate at room temperature for 15–30 minutes in order to prevent condensation on the chip surface.
- 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.
- Open the sensor chip pouch. Make sure that the sensor chip support remains fully inserted into the sheath at all times. If the chip is not inserted into the instrument immediately, it should be stored in a plastic bag.
- Dock the sensor chip in the instrument as described in the Instrument Handbook.

Immobilizing the ligand

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

For more detailed information on immobilization strategies and procedures, refer to the Biacore Sensor Surface Handbook.

Interaction analysis

Interaction analysis is performed by injection of samples over the sensor chip surface. Analyte molecules in the injected sample bind directly to the covalently immobilized ligand.

Refer to Biacore handbooks and www.gelifesciences.com/biacore for details on experimental protocols and methodology.

Regeneration

Regeneration of the immobilized ligand is performed by 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 CM7 is resistant to a wide range of agents for this purpose (Table 1). The choice of regeneration procedure may be limited by the stability of the ligand. Do not use harsher conditions than required to remove the analyte.

For more detailed information on regeneration strategies, refer to the Biacore Sensor Surface Handbook.

Chemical resistance

The surface of Sensor Chip CM7 is resistant to 1-minute pulses of many commonly used agents (Table 1).

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 – 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

Table 1. Common agents compatible with Sensor Chip CM7.

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