SophoMer™ F10 Instruction Manual

A SophoMer™ F10 Introduction

Signal noise caused by a non-specific interaction significantly affects immunoassay performance, mainly in terms of its detection limit. Reproducible noise suppression can be a challenging process. A new material, **SophoMer™ F10,** has been purposefully developed as an alternative for BSA (Bovine serum albumin), whereas its concentration levels for achieving the same level of blocking effect are several times lower when compared to BSA. It is a fully synthetic material which follows the contemporary trend of replacing the animal origin materials.

Benefits of Using the SophoMer™ F10 in Comparison with BSA Are:

- → **SophoMer™ F10** has a negligible functional batch to batch variability.
- → **SophoMer™ F10** does not contain any admixture of animal immunoglobulins, particularly important when considering the effect of presence of HAAA (Human-Anti-Animal-Antibodies) in the matrices of analyzed sample.
- → **SophoMer™ F10** does not create dimers in solution.
- → **SophoMer™ F10** is long term storable.
- → **SophoMer™ F10** has an excellent stability in solution.
- → No need to check TSE/BSE or other animal pathogens in **SophoMer™ F10.**

A Brief Guide for SophoMer™ F10 Application

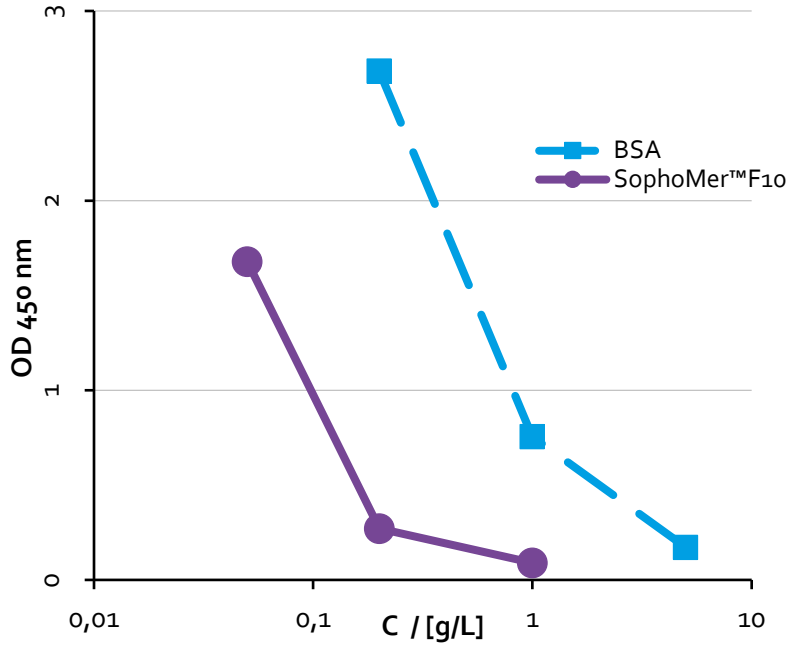
An important feature of **SophoMer™ F10** is that the immunoassay development process can stay identical as much as possible with the one established in the actual R&D laboratory.

The only changed step should be a replacement of BSA component by **SophoMer™ F10** in reagents, where BSA has a function of non-specific binding blocker of material on solid phase and/ or in solution.

In the first approximation, the use of a 5 times lower concentration of **SophoMer™ F10** compared to BSA is recommended. If the requested blocking effect is achieved, the next step should be optimizing of the concentration in the range of 5 - 10 times lower concentration.

The following graph illustrates the approximate reduction of signal originated from non-specific sorption of polyclonal Antibody conjugate with Peroxidase in the presence of various concentrations of **SophoMer™ F10** or BSA.

Comparison of non-specific signal in presence of SophoMer™ F10 and BSA at various concentrations levels



Description of SophoMer™ F10

Tab 1. Summary of SophoMer™ F10 Properties	
Form/appearance	White solid amorphous substance
Mw [kDa]	30
Isoelectric point in water at 25°C	n/a
Absorption peak [nm]	220
Solubility in water [g/L]	100
Solubility in ethanol [g/L]	> 100
Moisture content [% (w/w)]	5 % (estimate)
Immunogenicity	Not immunogenic

Tab 2. Recommendations for SophoMer™ F10 Application	
Hygroscopicity	Slightly hygroscopic. The vial containing **SophoMer™ F10** should be equilibrated at RT for 30 minutes before opening. Close the vial after manipulation without delay.
Storage conditions	2 - 8°C
Dissolution behavior	Mild foaming can be observed
Stability in solution	RT up to one week, 2 - 8°C long term.
Recommended antibacterial additives	Sodium azide, Thimerosal (standard concentrations)
Compatibility with surfactants	No effect was observed after addition of 0.05 % (w/w) of Tween 20.
Recommended pH range at which material keeps its expected performance	Standard buffers in pH range 4.7 - 7.8
Adsorption on surfaces	**Polystyrene:** very high **Polypropylene:** not detectable **Polyethylene:** not detectable **Glass:** not detectable **Polycarbonate:** not tested
Effect on other immunoassay components	**Immunoglobulins:** no cross-reaction observed **BSA:** no cross-reaction observed **Horse radish peroxidase:** no cross-reaction observed **Alkalic phosphatase:** not tested **β-Galactosidase:** not tested
Other recommendations	When used extensively, pay attention to decontamination of exposed lab equipment e.g.: microplate washers or automatic dosing systems. Decontamination reagents in case of need: 20 % - 30 % (v/v) ethanol in water.