



StabilCoat® and 5X StabilCoat  
Immunoassay Stabilizer  
Product insert

**Product number:**

SC01-0050 (50 mL)  
SC01-1000 (1000 mL)  
SC01-2000 (2000 mL)

SC05-0100 (100 mL)  
SC05-1000 (1000 mL)  
SC05-2000 (2000 mL)

**Intended use:**

StabilCoat® Immunoassay Stabilizer, and the 5X concentrate, effectively preserves the conformation and activity of dried proteins while simultaneously blocking the surface to reduce non-specific binding. The product can be used to stabilize antibodies, antigens or enzymes on an assortment of immunoassay components: polystyrene plates, tubes, glass, membranes, and filter paper.

The non-specific binding of serum proteins, conjugates and other assay components to solid surfaces in immunoassay applications requires that a blocking step be incorporated into the protocol to maximize assay sensitivity. Additionally, the manufacturing of immunoassays test kits requires long term protein stability to increase the manufacturing scale and extended shelf lives for the end user. The StabilCoat formulation allows for these requirements to be accomplished in a single step while easily being substituted for the blocking solution in an existing assay protocol.

**Product stability, storage and specifications:**

Product stability	StabilCoat: 3 years from date of manufacture 5X StabilCoat: 2 years from date of manufacture
Storage	Product should be stored at 2-8°C or room temperature
Specification	Bovine Protein: Contains bovine serum albumin Product Buffer: PBS pH: 7.0-7.4 when at working solution Preservative: None
Notes	Please note that SurModics Stabilization Products are shipped to customers at ambient temperature. Extensive stability studies have shown that prolonged storage at ambient temperature will not affect the product quality or efficacy.

**Recommendations for use:**

Aseptically pour off the desired volumes of material needed for the application and allow the product to equilibrate at room temperature prior to use.

The following are general guidelines only.

**To Prepare a Dilution of 5X StabilCoat Stabilizer:**

- 1) Add one part 5X StabilCoat to four parts deionized water.
- 2) Mix the solution without foaming to obtain a homogenous mixture.
  - Small batch volumes: Invert 10 times or use a stir bar for 15 minutes.
  - Large batch volumes: An automated mixer may be required.



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### To Stabilize Adsorbed or Immobilized Proteins on Microtiter Plates/Strips:

- 1) Immobilize or adsorb the primary protein (antibody or antigen) to the plate surface according to an optimized method.
- 2) Wash the plate to remove excess or weakly bound protein.
- 3) Add StabilCoat to allow interaction with the entire protein-coated surface.
  - For example: 150  $\mu$ L of StabilCoat per microwell should be used if 100  $\mu$ L of primary protein solution was used to coat the microwell.
  - The StabilCoat should be applied to the microwells before the immobilized protein dries on the plate. This will maximize the activity of the protein.
- 4) Incubate for 15 to 60 minutes at room temperature.
- 5) Aspirate the excess StabilCoat from the microwells.
- 6) Dry components for long-term storage using a method that is optimized by the end user. Recommended methods are as follows:
  - Dry in a humidity controlled chamber (less than 15% humidity) until dry (4 to 24 hours)
  - Dry 2-4 hours in a sealed desiccated container.
  - Dry plates at 30-40°C in a vacuum oven for 4 hours.
- 7) Package the stabilized coated plate in an airtight container/pouch with a desiccant.

### To Stabilize Adsorbed or Immobilized Proteins on Membranes:

- 1) Immobilize or adsorb the primary protein (antibody or antigen) to the membrane surface according to an optimized method.
- 2) Prepare a working strength blocking solution.
  - Mix one part StabilCoat with 3 parts deionized water or compatible buffer.
  - Alternatively, mix one part 5X StabilCoat with 19 parts deionized water or compatible buffer.
- 3) Add an appropriate mass of surfactant to make a 0.01% surfactant in the blocking solution.
- 4) Coat the membrane with the blocking solution and dry for long-term storage.
- 5) Package the stabilized coated membrane in an airtight container with a desiccant.

### Additional considerations:

If additional blocking is needed, one part StabilCoat and one part of another blocking buffer can be used to sufficiently block while incorporating the stabilization component of StabilCoat. Alternatively, one part 5X StabilCoat to 4 parts blocking buffer can be used.

A preservative may be added to StabilCoat if required by the assay protocol.



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**Related products:**

<b>Blockers/Stabilizers:</b>
StabilGuard® Immunoassay Stabilizer BSA-Free (SG01)
StabilGuard® Choice Microarray Stabilizer BSA-Free (SG02)
StabilCoat® Plus Microarray Stabilizer (SC02)
<b>In-Solution Protein Stabilizers &amp; Diluents:</b>
StabilZyme® Protein-Free Stabilizer (SZPF)
StabilZyme® Protein-Free AP Stabilizer (SAPF)
StabilZyme® AP Conjugate Stabilizer (SA01)
StabilZyme® HRP Conjugate Stabilizer (SZ02)
StabilZyme <i>SELECT</i> ® Stabilizer (SZ03)
StabilZyme® <i>NOBLE</i> Stabilizer BSA-Free (SZ04)
Assay Diluent-HAMA Blocker (SM01)
<b>Substrates:</b>
BioFX® TMB One Component HRP Microwell Substrate (TMBW)
BioFX® TMB Supersensitive One Component HRP Microwell Substrate (TMBS)
BioFX® TMB Slow Kinetic One Component HRP Microwell Substrate (TMSK)
BioFX® TMB Enhanced HRP Membrane Substrate (ESPM)
BioFX® TMB One Component HRP Membrane Substrate (TMBM)
BioFX® pNPP Yellow One Component Microwell Substrate with Stabilizing Pellets (PNPS)
BioFX® ABTS One Component HRP Microwell Substrate (ABTS)

Products distributed by



**DIARECT AG**  
Bötzingen Str. 29 B  
79111 Freiburg  
Germany

Tel. +49 761 47979-0  
Fax +49 761 47979-29  
[www.diarect.com](http://www.diarect.com)  
[orders@diarect.com](mailto:orders@diarect.com)  
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