

# StabilGuard® Choice

## Microarray Stabilizer (BSA-free)

9924 West 74<sup>th</sup> Street  
Eden Prairie, MN 55344

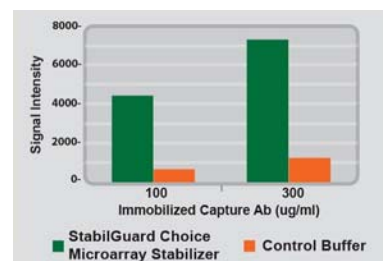
StabilGuard® Choice Microarray Stabilizer (BSA-Free) improves the stability of proteins bound to microspheres stored in solution, and array proteins stored in the dried state.

### Stability Data

Accelerated stability studies were conducted to evaluate the effectiveness of StabilGuard Choice stabilizer to block and stabilize rabbit polyclonal IgG antibody covalently attached to polystyrene microspheres in solution. Antibody-coated microspheres were stored in solution at 45°C with either StabilGuard Choice stabilizer or a control buffer. StabilGuard Choice stabilizer retained >96% binding activity of the antibody coated to the microspheres after 79 days at 45°C.



Monoclonal antibody to IFN $\gamma$  (100 and 300  $\mu$ g/mL) was arrayed on a SurModics protein-binding surface using BioRobotics split pins and arrayer. Cocktail antigens containing recombinant human IFN $\gamma$  (25 ng/mL) were incubated on slides using either a control buffer or StabilGuard Choice stabilizer. Arrays were developed with biotinylated antibody cocktail suspended in either the control buffer or StabilGuard Choice stabilizer. The spots were visualized using Streptavidin Cy5. Enhanced signal intensity was achieved using StabilGuard Choice stabilizer.



### Properties

<b>Storage</b>	Product should be refrigerated or stored at room temperature. Please note that this product is 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.
<b>Bovine Protein</b>	<b>NO</b>
<b>Dry Weight (g/mL)</b>	0.057 - 0.066
<b>Product Buffer</b>	PBS
<b>pH</b>	6.6 - 7.2
<b>Preservative</b>	0.02% methylisothiazolone, 0.02% bromonitrodioxane
<b>Shelf Life</b>	3 years
<b>Acceptable Diluents</b>	Deionized water or PBS

### Applications

- StabilGuard Choice stabilizer protects the activity of proteins while simultaneously blocking nonspecific binding sites on microspheres. It also prevents microsphere aggregation, keeping them monodispersed even after long-term storage. *Note: StabilGuard Choice stabilizer should not be used with proteins that are adsorbed to microspheres.*
- The conformation and activity of proteins on arrays are also effectively preserved long-term in a dried state when stored with StabilGuard Choice stabilizer. More accurate results are produced on array slides by increasing signal, reducing background, and improving sensitivity.

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### Recommendations for Use

*The following are general guidelines only.*

#### For Microsphere-Based Assays

1. Coat microspheres according to adopted procedure including any quenching steps for covalent coupling. To prevent aggregation, wash microspheres in coating buffer or other suitable buffer that does not contain detergents or proteins.
2. Depending on the handling method used, resuspend or introduce StabilGuard Choice stabilizer to the microspheres for a final microsphere concentration of 10 mg/mL. Ensure that the microspheres are not aggregated before proceeding to the next step.
3. Incubate for two hours at 37°C with end-over-end mixing, or incubate overnight at room temperature.
4. Wash the microspheres in StabilGuard Choice stabilizer and bring them to the final desired concentration in the same buffer. If clumping is observed, disrupt with vortexing or mild sonication. Store finished microspheres at 2-8°C. Wash once in a system-compatible buffer before using the stored microspheres in the desired application.

#### For Microarray Slides/Substrates

1. For protein immobilization, follow the slide manufacturer's recommended procedure. After immobilizing the protein, block the slides by incubating them in an excess of StabilGuard Choice stabilizer for at least thirty minutes at room temperature.
2. After blocking, and depending on the order of addition required by the assay procedure being used, dilute the antigen and detection proteins in StabilGuard Choice stabilizer. Incubate each step for two hours at room temperature.
3. Wash the slide with 1X TNT (Tris, Sodium Chloride, Tween 20) for 30 minutes between protein-containing incubations.
4. After incubating with the detection protein, wash the slides three times with 1X TNT for five minutes each time.
5. Rinse the slide with deionized water three times. Spin dry.

### Technical Assistance

For technical inquiries, please email [IVDtechsupport@surmodics.com](mailto:IVDtechsupport@surmodics.com) or call (962) 829-2709.

### Ordering Information

To place an order for this product, please contact our customer service at:

Tel: (952) 829-2709  
Toll Free: (800) 755-7793  
Fax: (952) 829-2743  
Email: [orders@surmodics.com](mailto:orders@surmodics.com)  
Web: [www.surmodicsIVD.com](http://www.surmodicsIVD.com)

<b>StabilGuard Choice Microarray Stabilizer (BSA-Free) is available in the following size:</b>
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<b>1000 mL</b>
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<b>SG02-1000</b>
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