

**SurModics® Assay Diluent (Protein-Free)**

Product insert

**Product number:**

SM01-0050 (50 mL)

SM01-1000 (1000 mL)

**Intended use:**

The SurModics® Assay Diluent (Protein-Free) is a universal blocking agent that utilizes synthetic components to reduce matrix interference within immunoassay applications. The product was designed to be used within the existing assay protocol to proactively block interferences using a non-specific blocking mechanism. Increased signal-to-noise ratios are produced when using the product with samples containing heterophilic antibodies (HAMA and rheumatoid factor).

SurModics® Assay Diluent (Protein-Free) may be augmented with active block agents when a specific blocking mechanism is required.

**Product stability, storage and specifications:**

Product Stability	Stable for 2 years from date of manufacture
Storage	Product should be stored at 2-8° C
Specifications	Proteins: None Product Buffer: PBS pH: 6.6-7.2 Preservative: 0.02% methylisothiazolone and 0.02% bromonitrodioxane
Notes	Please note that this product is shipped at ambient temperatures. Extensive transit stability studies have demonstrated the product can withstand 8 weeks of stressed storage conditions at 37° C and still perform equivalent to the 4° C control.

**Recommendations for use:**

Aseptically pour off the desired volume of material needed for the application and allow the product to equilibrate at room temperature prior to use. For optimal performance the product should be used undiluted.

Use of SurModics® Assay Diluent (Protein-Free) to proactively block interference within an ELISA:

## Method 1:

- 1) Dilute standards, controls and test samples in the SurModics® Assay Diluent (Protein-Free) to the pre-determined concentrations.
  - Common test sample dilution factors are 1:2 to 1:10
- 2) Add standards, controls and test samples to plate.
- 3) Run the ELISA according to the defined assay protocol.

## Method 2:

- 1) Add standards, controls and test samples to the plate.
- 2) Add 50-150 µL of SurModics® Assay Diluent (Protein-Free) to the plate. The volumes are empirically determined by the lab.
- 3) Run the ELISA according to the defined assay protocol.

Use of SurModics® Assay Diluent (Protein-Free) with potential discordant samples:

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- 1) Repeat original assay to confirm discordant result.
- 2) Dilute discordant sample in SurModics® Assay Diluent (Protein-Free).
  - Serially dilute sample 1:2.
  - Add standard, controls and serial dilution samples to plate.
- 3) Run the ELISA according to the defined assay protocol.
- 4) Analyze sample linearity recovery of discordant sample.
- 5) Upon dilution, the SurModics® Assay Diluent (Protein-Free) will reduce matrix interferences leading to improved true sample values.

### **Additional considerations:**

- 1) What is matrix interference?
  - The term "matrix" refers to the unknown components of a patient's sample other than the intended analyte. When these unknown components interfere with sample analysis, it is referred to as matrix interference. Matrix interference can lead to incorrect sample analyses and unreliable results in immunoassays.
- 2) What are the causes of matrix interference?
  - Matrix interferences arise from both exogenous factors (e.g. hemolysis) and endogenous characteristics of the sample. Endogenous substances such as heterophilic antibodies, anti-animal antibodies and autoantibodies can react with the assay antibodies/antigens to produce falsely elevated or depressed results.
- 3) Does SurModics® Assay Diluent (Protein-Free) work better with specific classes of heterophilic antibodies such as IgG vs. IgM?
  - The product utilizes a non-specific blocking mechanism that prevents weak binding interactions across all types of heterophilic antibodies. The protein free formulation is not limited to use with specific classes of heterophilic antibodies.

For technical assistance, email [ivdtechsupport@surmodics.com](mailto:ivdtechsupport@surmodics.com)

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**Related products:**

<b>In-Solution Protein Stabilizers &amp; Diluents:</b>
StabilZyme® AP Conjugate Stabilizer (SA01)
StabilZyme® Protein-Free AP Stabilizer (SAPF)
StabilZyme® HRP Conjugate Stabilizer (SZ02)
StabilZyme® SELECT Stabilizer (SZ03)
StabilZyme® NOBLE Stabilizer (SZ04)
StabilZyme® Protein Free Stabilizer (SZPF)
<b>Blockers/Stabilizers:</b>
StabilGuard® Immunoassay Stabilizer-BSA Free (SG01)
StabilCoat® Immunoassay Stabilizer (SC01)
<b>TMB Substrates:</b>
BioFX® TMB Super Sensitive One Component HRP Microwell Substrate (TMBS)
BioFX® TMB One Component HRP Microwell Substrate (TMBW)
BioFX® TMB Slow Kinetic One Component HRP Microwell Substrate (TMSK)

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