

Introduction

MSD GOLD™ Streptavidin- and Avidin-coated plates use Meso Scale Diagnostics' electrochemiluminescence technology to develop highly sensitive and robust immunoassays. Our MULTI-ARRAY® technology forms the basis of an immunoassay system for measuring biomarkers and determining immunogenicity of therapeutic agents. At the core of this technology are MSD GOLD plates and reagents that are a signature of our commitment to quality, consistency, and high performance. MSD GOLD designation certifies that the plates and reagents conform to rigorous specifications for reproducibility and precision. These specifications are designed to meet the requirements of critical assays and clinical research for the drug safety and toxicology communities.

Plate Type Selection

MSD GOLD Streptavidin- and Avidin-coated plates are available in different spot formats as illustrated below. The plates are distinctive with regard to their surface type, areas, and binding capacity, and they offer unique advantages for assay performance.



Plate Type	Surface Type	Binding Capacity (IgG)	Assay Sensitivity
Small Spot Streptavidin	Hydrophobic	0.075 pmol/well	+++
Streptavidin	Hydrophobic	0.3 pmol/well	++
High Bind Avidin	Hydrophilic	0.6 pmol/well	+

In general, avidin-coated plates have higher binding capacity due to their hydrophilic surface, but tend to offer lower signals and sensitivity. These plates are ideal for assays that require a large dynamic range. Alternatively, streptavidin-coated plates have relatively lower binding capacity but provide higher assay signals and sensitivity due to their hydrophobic surface. MSD GOLD Streptavidin-coated plates are suited for use with homogenous assays or bridging assays, such as typical immunogenicity assays that require high free-drug tolerance. Small Spot Streptavidin-coated plates provide the highest assay signals and offer superior sensitivity.

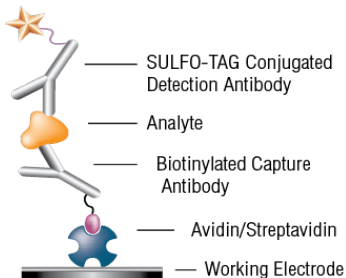
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MSD GOLD Streptavidin and Avidin Plates

Quick Guide

Biomarker Assay Protocol

Assays may be developed in many different formats on MSD GOLD Streptavidin- and Avidin-coated plates.



Add Blocking Solution (optional)

- Add 150 μL /well MSD Blocker A solution. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Capture Antibody

- Add 25 μL /well biotinylated capture antibody. Incubate for 1 hour at room temperature with shaking (500–1000 rpm) or overnight at 2–8 $^{\circ}\text{C}$.
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Sample

- Add 50 μL /well sample. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Detection Antibody

- Add 25 μL /well SULFO-TAG™ detection antibody solution. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Read Buffer

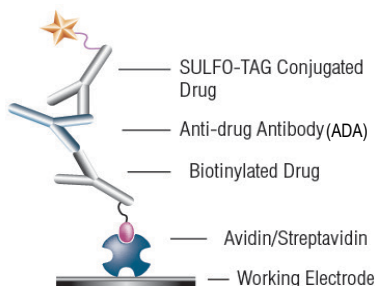
- Add 150 μL /well undiluted MSD GOLD Read Buffer A or 2X MSD Read Buffer T.
- Analyze with an MSD instrument.

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MSD GOLD Streptavidin and Avidin Plates

Quick Guide

Immunogenicity Assay Protocol



Prepare Master Mix Solution

- Add 50 μL of Master Mix (containing biotinylated drug and SULFO-TAG conjugated drug mixture) and 25 μL of sample or standard to each well of a round-bottom 96-well polypropylene plate.

- Incubate for 2 hours at room temperature with shaking (500–1000 rpm) or overnight at 2–8 $^{\circ}\text{C}$.

Add Blocking Solution

- During the incubation, add 150 μL /well MSD Blocker A solution to the MSD plate. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).

- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Transfer to MSD Plate

- Transfer 50 μL /well assay solution from each well of polypropylene plate to the MSD plate. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).

- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Read Buffer

- Add 150 μL /well undiluted MSD GOLD Read Buffer A or 2X MSD Read Buffer T.

- Analyze with MSD instrument.

In addition to the formats described here, MSD GOLD Streptavidin- and Avidin-coated plates can be used to develop assays in other formats. More information on these assay formats are provided in the detailed product insert on MSD GOLD Streptavidin and Avidin Plates available at www.mesoscale.com.

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MSD GOLD Streptavidin and Avidin Plates

Quick Guide

Homogenous Assay Protocol

Add Blocking Solution (optional)

- Add 150 μ L/well MSD Blocker A solution. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).
- Wash plate 3X with 200 μ L/well 1X MSD Wash Buffer.

Add Capture Antibody, Sample, and Detection Antibody Mix

- Add 25 μ L/well biotinylated capture antibody, 25 μ L/well SULFO-TAG conjugated detection antibody, and 25 μ L/well sample. Incubate for 1 hour at room temperature with shaking (500–1000 rpm).
- Wash plate 3X with 200 μ L/well 1X MSD Wash Buffer.

Add Read Buffer

- Add 150 μ L/well undiluted MSD GOLD Read Buffer A or 2X MSD Read Buffer T.
- Analyze with an MSD instrument.

Catalog Numbers

Plate Type	SECTOR™ Plates	QuickPlex® Plates
96-well Small Spot Streptavidin	L45SA ¹	L4BSA ²
96-well Streptavidin	L15SA ¹	L55SA ³
96-well High Bind Avidin	L15AB ¹	L55AB ³

Notes:

- SECTOR plates can be used on the: MESO® SECTOR S 600MM, MESO SECTOR® S 600, MESO QuickPlex® SQ 120MM, MESO QuickPlex SQ 120, SECTOR Imager 6000, SECTOR Imager 2400, and SECTOR Imager 2400A.
- 96-well Small Spot Streptavidin QuickPlex Plates (L4BSA) can only be used on the MESO QuickPlex Q 60MM instrument.
- 96-well Streptavidin QuickPlex plates (L55SA) and 96-well High Bind Avidin QuickPlex plates (L55AB) can be used on the MESO QuickPlex SQ 120MM, MESO QuickPlex SQ 120, and MESO QuickPlex Q 60MM.

Contact Information

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