

Quick Guide

Introduction

MSD GOLD™ Streptavidin and Avidin plates take advantage of our 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	+

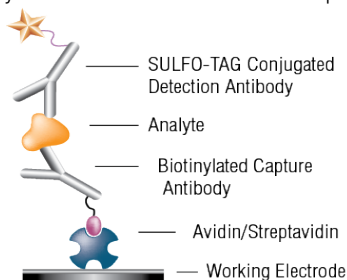
In general, avidin-coated plates have higher binding capacity due to their hydrophilic surface, but tend to offer lower signals and sensitivity. These plates are ideal for assays that require a large dynamic range. Alternatively, streptavidin-coated plates have relatively lower binding capacity, but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

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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.
- 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 or overnight at 2–8°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.
- 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.
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

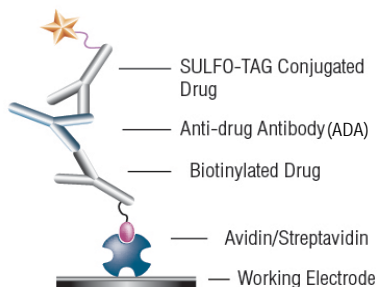
Add Read Buffer

- Add 150 μL /well Read Buffer T (1X).
- Analyze with MSD instrument.

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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 or overnight at 2-8°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.
- 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.
- Wash plate 3X with 200 μL /well 1X MSD Wash Buffer.

Add Read Buffer

- Add 150 μL /well Read Buffer T (2X).
- Analyze with MSD instrument.

In addition to the formats described here, MSD GOLD Streptavidin and Avidin plates may 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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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.
- 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.
- Wash plate 3X with 200 μ L/well 1X MSD Wash Buffer.

Add Read Buffer

- Add 150 μ L/well Read Buffer T (1X).
- Analyze with MSD instrument.

Catalog Numbers	SECTOR [®] Plates	QuickPlex [®] Plates
96-well Streptavidin	L15SA	L55SA
96-well Small Spot Streptavidin	L45SA	N/A
96-well High Bind Avidin	L15AB	L55AB
Streptavidin Plate Assay Development Training Pack	K15238K-1	N/A

Note: SECTOR plates can be used on both SECTOR Imagers and MESO[®] QuickPlex SQ 120 instruments. QuickPlex plates were designed to be read one well at a time by MESO QuickPlex[®] SQ 120 instruments.

Ordering Information

MSD Customer Service

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MSD Scientific Support

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