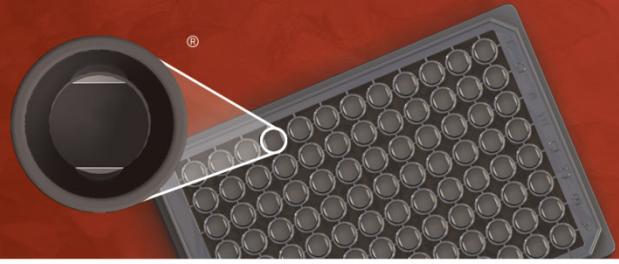
MSD® GOLD Streptavidin and Avidin Plates



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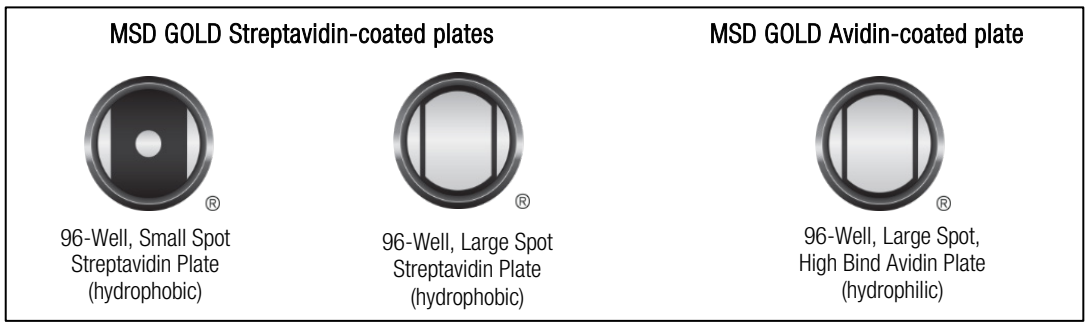
Product Names	Cat. No.	Compatible Instruments
MSD GOLD™ 96-well Small Spot Streptavidin SECTOR Plates	L45SA	MESO® SECTOR S 600MM, MESO SECTOR® S 600, SECTOR Imager 6000, SECTOR Imager 2400, MESO QuickPlex® SQ 120, MESO QuickPlex SQ 120MM
MSD GOLD 96-well Streptavidin SECTOR™ Plates	L15SA	
MSD GOLD 96-well High Bind Avidin SECTOR Plates	L15AB	
MSD GOLD 96-well Streptavidin QuickPlex® Plates	L55SA	MESO QuickPlex SQ 120, MESO QuickPlex SQ 120MM, MESO QuickPlex Q 60MM
MSD GOLD 96-well High Bind Avidin QuickPlex Plates	L55AB	
MSD GOLD 96-well Small Spot Streptavidin QuickPlex Plates	L4BSA	MESO QuickPlex Q 60MM

MSD GOLD Streptavidin- and Avidin-coated MULTI-ARRAY® plates provide a rapid and convenient method for the development of sandwich immunoassays, bridging immunogenicity assays, and assays for pharmacodynamic and pharmacokinetic studies. These plates are available in different spot formats as illustrated below. Streptavidin plates have a hydrophobic surface. High Bind Avidin plates have a hydrophilic surface.



Choosing a Plate Type

Selection of the right plate type is critical for assay development. Several parameters play a role in determining the best plate type for an assay. In general, avidin-coated plates have the 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.

The following table lists the binding capacity of MSD GOLD Streptavidin- and Avidin-coated plates as measured by titrating biotin-tagged IgG (BTI) (illustrated below) in each plate. The amounts are based on picomoles per well of biotinylated material. The capacity for non-IgG proteins or other biologicals may differ (Figure 1; Table 1).

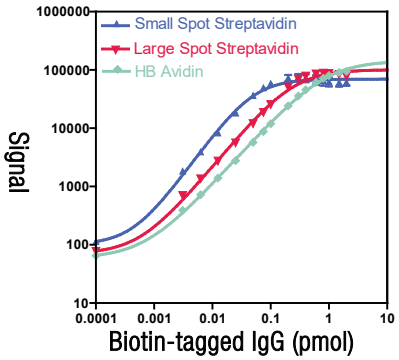


Figure 1. BTI, plates, and signals
HB = High Bind

Table 1. Plate specifications.

MSD GOLD Plate Type	Surface Type	Binding Capacity (IgG)
Small Spot Streptavidin	Hydrophobic	0.075 pmol/well
Large Spot Streptavidin	Hydrophobic	0.3 pmol/well
High Bind Avidin	Hydrophilic	0.6 pmol/well

Plate Reproducibility

Plate reproducibility was measured by testing entire MSD GOLD 96-well Streptavidin plates with a constant amount of BTI at 0.2 pmol/well. The mean signal and percent coefficient of variation (%CV) were calculated for each plate (intra-plate %CV) and across plates (inter-plate %CV). The plots below show the reproducibility data from 407 lots of MSD GOLD Streptavidin plates. The average intra-plate %CVs over an eight-year period are shown in Figure 2 on the left. Individual plate measurements for 14,917 plates are shown in Figure 2 on the right. All plate lots met the quality specifications with a mean intra-plate CV of less than 6% and no plate having an intra-plate CV greater than 12%.

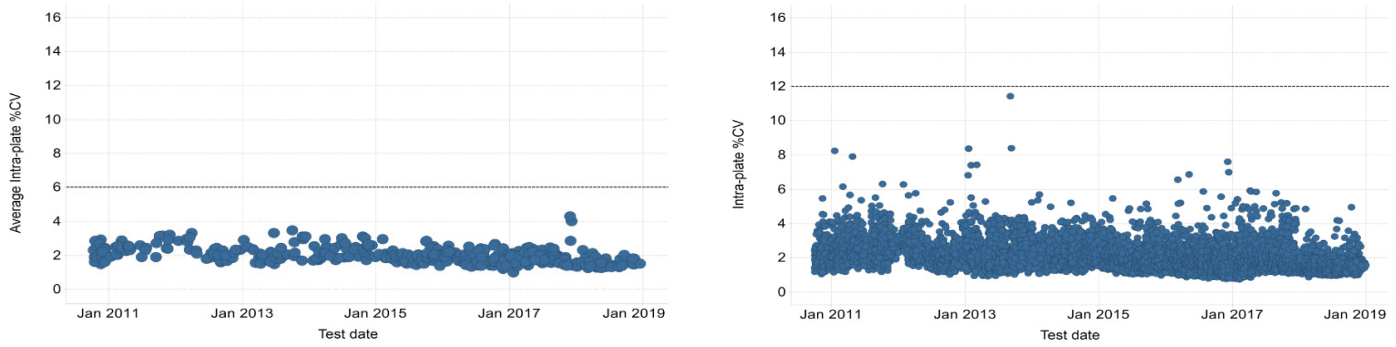


Figure 2. Representative reproducibility of MSD GOLD 96-well Streptavidin-coated plates when tested with a constant concentration of BTI on whole plates.

Plate Specifications

MSD GOLD designation certifies that the plates meet stringent specifications for consistency, reproducibility, and binding capacity. Each plate lot meets the consistent release criteria specified on the full certificate of analysis that is provided with the plates. Quality control specifications for MSD GOLD plates are shown below (Table 2; Table 3).

Table 2. Whole-plate uniformity QC specifications.

Metric	Specification
Mean intra-plate CV	<6%
Intra-plate CV	<8% for at least 91.5% of plates
Number of plates with intra-plate CV >12%	0 plates
Inter-plate CV	<8%
Plates where signal >20% from plate mean occurs in same well on multiple plates	0 plates
Wells with signal >50% from plate mean	0 wells
Median signal for columns, max to min range	<10% for at least 91.5% plates, <15% for all plates
Median signal for rows, max to min range	<10% for at least 91.5% plates, <15% for all plates

Table 3. BTI concentration: signals, CV, and SD.

Concentration of BTI for 96-well Streptavidin SECTOR Plate	Mean Electrochemiluminescence Signal Specification and Tolerance Range	Intra-plate CV or Standard Deviation (SD)
6 nM (0.3 pmol)	*73,000 ±15%	CV <10%
4 nM (0.2 pmol)	*55,000 ±15%	CV <10%
2 nM (0.1 pmol)	*28,000 ±15%	CV <10%
0 nM (0 pmol)	≤100 counts	SD ≤15 counts

*These signal specifications represent a specific lot of BTI reagent and may vary for different lots. For the actual specifications, refer to the certificate of analysis supplied with plates.