

# MSD<sup>®</sup> Standard and High Bind Plates



www.mesoscale.com<sup>®</sup>

## Ordering Information

MSD Customer Service  
Phone: 1-301-947-2085  
Fax: 1-301-990-2776  
Email: CustomerService@mesoscale.com

## Scientific Support

Phone: 1-301-947-2025  
Email: ScientificSupport@mesoscale.com

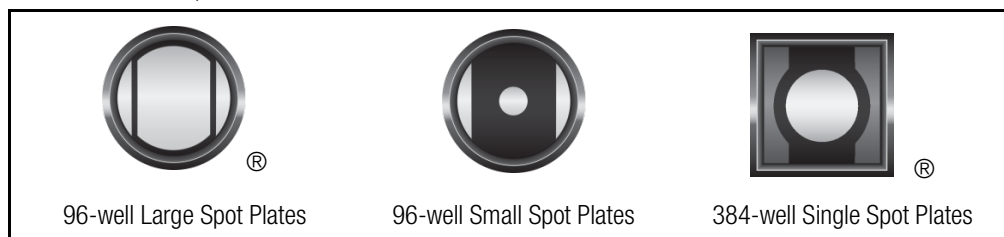
## Company Address

MESO SCALE DISCOVERY<sup>®</sup>  
A division of  
Meso Scale Diagnostics, LLC.  
1601 Research Boulevard  
Rockville, MD 20850-3173 USA  
www.mesoscale.com<sup>®</sup>

**For Research Use Only.**  
Not for use in diagnostic procedures.

Product Name	Cat. No.	Compatible Instruments
96-well Standard SECTOR <sup>™</sup> Plate	L15XA	MESO <sup>®</sup> SECTOR S 600MM, MESO SECTOR <sup>®</sup> S 600, SECTOR Imager 6000, SECTOR Imager 2400, MESO QuickPlex <sup>®</sup> SQ 120, MESO QuickPlex SQ 120MM
96-well High Bind SECTOR Plate	L15XB	
96-well Small Spot SECTOR Plate	L45XA	
96-well Small Spot High Bind SECTOR Plate	L45XB	
MA6000 384-well Standard SECTOR Plate	L21XA	MESO SECTOR S 600MM, MESO SECTOR S 600, SECTOR Imager 6000,
MA6000 384-well High Bind SECTOR Plate	L21XB	
MA2400 384-well Standard SECTOR Plate	L25XA	SECTOR Imager 2400
MA2400 384-well High Bind SECTOR Plate	L25XB	
96-well Standard QuickPlex <sup>®</sup> Plate	L55XA	MESO QuickPlex SQ 120, MESO QuickPlex SQ 120MM, MESO QuickPlex Q 60MM
96-well High Bind QuickPlex Plate	L55XB	

MSD's uncoated MULTI-ARRAY<sup>®</sup> plates provide a rapid and convenient method for the development of new assays and the transfer of existing immunoassays to the MSD platform. This insert provides instructions on coating MSD Standard and High Bind plates. These plates are available in different spot formats as illustrated below.



## Choosing a Plate Type

MSD provides 96-well and 384-well plates with two surface types: High Bind plates have a hydrophilic surface, and Standard plates have a hydrophobic surface. The amount of capture reagent that can be coated on a plate is determined by the combination of the spot size and the surface type.

When coating MSD plates, it is necessary to take the binding capacity of the plate into consideration. The table below indicates the binding capacity of the different plate types. It was measured using IgG as the capture reagent and SULFO-TAG<sup>™</sup> conjugated protein AG as the reporter. These values may vary for non-IgG proteins. Standard plates tend to offer higher sensitivity while High Bind plates can facilitate the quantification of analytes at higher concentrations.

Plate Type	Surface Type	Binding Capacity (IgG)		
		96-well, 1 Spot	96-well, Small Spot	384-well, 1 spot
Standard Plate	Hydrophobic	1.0 pmole/well	0.25 pmole/well	0.2 pmole/well
High Bind Plate	Hydrophilic	5.0 pmole/well	1.25 pmole/well	1.0 pmole/well

## Plate Coating Protocol

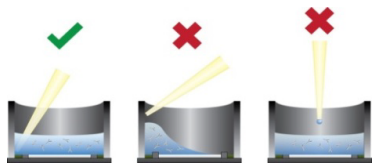
A variety of capture reagents including antibodies, peptides, antigens, carbohydrates, lysates, cells, membranes, oligonucleotides, and virus-like particles can be directly immobilized on MSD Standard and High Bind plates. The following methods may be used:

- **Solution Coating:** This technique is similar to the way ELISA plates are coated.
- **Spot Coating:** This method coats the spots only, conserving capture reagent.

# MSD Assay Development Products

## Solution coating protocol

The protocol for solution coating is the same for Standard and High Bind plates. The recommended coating concentration range for solution coating of antibodies is 1–20 µg/mL.

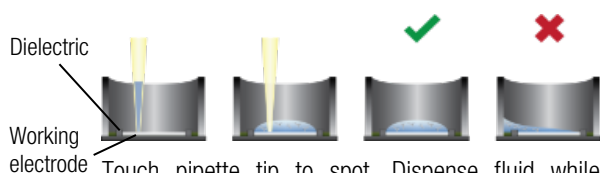


Add the diluted antibody directly to the bottom corner of each well. Tap plate firmly to ensure that the solution covers the bottom of each well evenly.

Plate Type	Coating Volume/Well	Coating Buffer	Incubation Time
96-well Plate	50 µL	PBS	Overnight at 2–8 °C, sealed
384-well Plate	15–25 µL		

## Spot Coating Protocol

Standard and High Bind plates use different coating buffers for spot coating due to their different surface hydrophobicity. Standard plates require some surfactant in the coating buffer to allow the solution to spread and cover the spot. The coating and incubation parameters for the different plate types are provided in the table below. The recommended coating concentration range for spot coating antibodies is 4–40 µg/mL.



Touch pipette tip to spot. Dispense fluid while touching the spot. Fluid should spread to the edge of the spot and form a dome over the entire spot. Fluid should not breach the spot edges.

Plate Type	Coating Volume/Well	Coating Buffer	Incubation Time
96-well Standard	5 µL	PBS + 0.03% Triton X-100	Overnight without sealing
96-well Small Spot Standard	1 µL		
384-well Standard	1 µL		
96-well High Bind	5 µL	PBS	1 hour with plate sealed, or overnight without sealing
96-well Small Spot High Bind	1 µL		
384-well High Bind	1 µL		

## Related Products

MSD offers a variety of assay development plates and reagents including blockers, secondary reporters, and diluents. A complete list of these products and information about them is available at [www.mesoscale.com](http://www.mesoscale.com).

Reagents	Catalog #	Description
ELISA Conversion Pack I	K15A01-1	Uncoated plates for immobilizing unlabeled capture antibodies
ELISA Conversion Pack II	K15A01-2	Plates pre-coated with anti-species antibodies for immobilizing antibodies from glycerol stocks or antibody stocks with high concentrations of carrier proteins
ELISA Conversion Pack III	K15A01-3	Plates pre-coated with avidin or streptavidin for immobilizing biotinylated antibodies
SULFO-TAG NHS-Ester	R91AN-3	Labeling reagent with an NHS-Ester functional group for conjugating molecules containing primary amines for use as detection reagents
SULFO-TAG Streptavidin	R32AD-5	Labeling reagent for use as a secondary reporter with biotinylated detection antibodies or other biotinylated detection reagents as primary detection reagents
SULFO-TAG Anti-Mouse Antibody (Goat)	R32AC-5	Labeling reagent for use as a secondary reporter with unlabeled mouse antibodies as primary detection reagents
SULFO-TAG Anti-Rabbit Antibody (Goat)	R32AB-5	Labeling reagent for use as a secondary reporter with unlabeled rabbit antibodies as primary detection reagents
Diluent 100	R50AA-4	A blend of stabilizers and protein in PBS for use as an antibody diluent

Please view the comprehensive product insert for MSD Standard and High Bind plates available at [www.mesoscale.com](http://www.mesoscale.com) for detailed instructions and guidance on assay development, assay optimization, FAQs, and journal references on different applications of the plates.

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