



Thermo Scientific Immunoassay Plate Guide

- Passive binding of biomacromolecules
- Covalent coupling of smaller biomolecules
- Capture of affinity-tagged biomolecules

the right surface
for your assay

the right surface for your assay

Advanced Immunoassay Surface Technology

The functionality of Thermo Scientific immunoassay products lies in the surface and design

This Guide provides information about passive binding surfaces for biomacromolecules, covalent coupling surfaces for smaller biomolecules and affinity capture surface for affinity-tagged biomolecules.

Immunoassay techniques are extremely sensitive and contain detection limits in the range of 10 fmol. In order to obtain accurate, reproducible, and positive results, it is essential that you choose the appropriate surface with optimized conditions. By choosing a Thermo Scientific plate, you benefit from more than 30 years of industry leading experience in immunoassay plate technology, and a broad range of surfaces and formats to optimize your assay.

When selecting a plate

A number of points need to be taken into consideration when selecting your assay plate: the type of biomolecule, surface and plate format (strip or solid), color (clear, black or white), well volume, and instrument compatibility (pinchbar or regular flange).

Well Configuration



Compatible with monochromatic reading
• F-well (Flat bottom)



For easier washing
• C-well (Modified F-bottom)

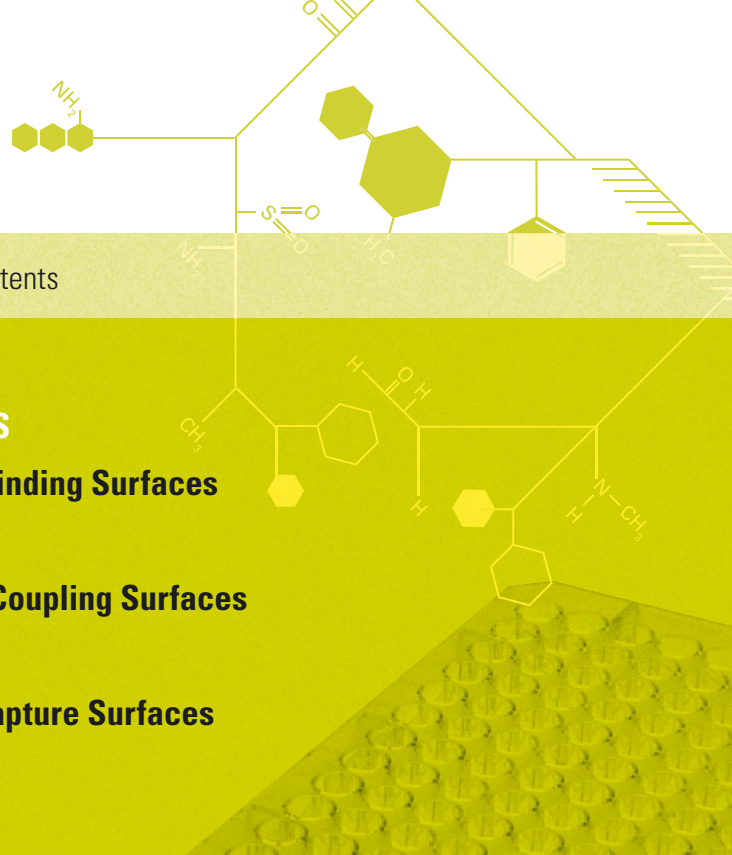


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For biomacromolecules

For smaller biomolecules

For affinity-tagged biomolecules



For optimal washing
(use dual beam reader)
• U-well (Round bottom)



For increased surface/volume ratio
and increased sensitivity
• StarWell bottom

Passive Binding Surfaces

Passive surfaces have a broad range of applications as they can bind to a variety of biomolecules. Passive binding is primarily suited for the immobilization of medium to large sized molecules, such as antibodies, which are capable of establishing several contact points. The exact molecular interaction sites are dependent on the specific matching of the biomolecule's structure with the polymer surface structure. A large variety of biomolecules can be immobilized on passive surfaces with good residual activity.

The family of Thermo Scientific passive surfaces vary in their degree of hydrophilicity and are organized into four different sub-groups: hydrophobic, slightly hydrophilic, hydrophilic, and very hydrophilic. A hydrophobic surface functions predominately via hydrophobic binding. As the surface is made more hydrophilic by the incorporation of oxygen containing functional groups, electrostatic interactions can play a greater role in binding, thus influencing which types of biomolecules will bind strongly to the surface (see Table on Page 5).

A wide variety of surfaces are available
for performance optimization

This table provides general guidelines for the selection of passive surfaces for the immobilization of particular biomolecules.

Passive Category

Hydrophobic

These surfaces are typically used for the adsorption of hydrophobic molecules such as lipid rich biomolecules.

Slightly hydrophilic

The slight hydrophilicity of these plates enhances their ability to bind a diverse range of biomolecules, including glycoproteins, serum containing samples and amphoteric molecules such as lipopolysaccharides. With these plates non-specific adsorption of serum containing samples are reduced and this will improve the signal to noise (S/N) ratio and consequently, sensitivity levels.

Hydrophilic

Optimized to bind high amounts of IgG (polyclonal), these plates are ideal for antibody sandwich assays (e.g., ELISAs). In addition, they show increased binding of many other proteins and biomolecules that possess hydrophilic/hydrophobic characteristics.

Very hydrophilic

The most hydrophilic in our portfolio, many hydrophilic proteins will bind with a high affinity to these plates. Binding does, however, tend to be more pH sensitive.



PASSIVE BINDING SURFACE CHARACTERISTICS

- **Adsorb larger biomolecules**
- **A large number of molecular orientations is possible**

BIOMOLECULE

The likelihood of effectively immobilizing a biomolecule on a particular surface is indicated in the table below.

| Surface | Immunoglobulins | Proteins (water soluble) | Proteins (less water soluble) | Glycans |
|------------------------|-----------------|--------------------------|-------------------------------|---------|
| PolySorp | Fair | Fair | Very Good | Low |
| Immulon 1 B | Fair | Fair | Very Good | Low |
| Universal Binding (UB) | Fair | Fair | Very Good | Low |
| Microlite 1+ | Fair | Fair | Very Good | Low |
| Microfluor 1 | Fair | Fair | Very Good | Low |
| Immulon 2 HB | Good | Good | Good | Fair |
| Microlite 2+ | Good | Good | Good | Fair |
| Microfluor 2 | Good | Good | Good | Fair |
| MediSorp | Good | Good | Good | Fair |
| MaxiSorp* | Very Good | Very Good | Fair | Good |
| Immulon 4 HBX | Very Good | Very Good | Fair | Good |
| Enhanced Binding (EB) | Very Good | Very Good | Fair | Good |
| MultiSorp | Low | Good | Fair | Good |

* Optimized for IgG binding

Passive Binding Surfaces

Hydrophobic

These surfaces are typically used for the adsorption of hydrophobic molecules such as lipid rich biomolecules.

Slightly hydrophilic

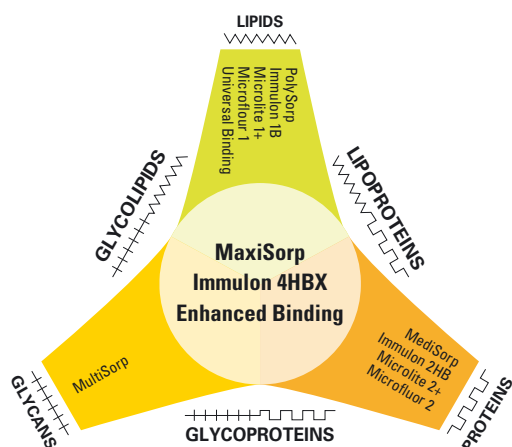
The slight hydrophilicity of these plates enhances their ability to bind a diverse range of biomolecules, including glycoproteins, serum containing samples and amphoteric molecules such as lipopolysaccharides. With these plates, non-specific adsorption of serum containing samples are reduced and this will improve the signal to noise (S/N) ratio and consequently, sensitivity levels.

Hydrophilic

Optimized to bind high amounts of IgG (polyclonal), these plates are ideal for antibody sandwich assays (e.g., ELISAs). In addition, they show increased binding of many other proteins and biomolecules that possess hydrophilic/hydrophobic characteristics.

Very hydrophilic

The most hydrophilic in our portfolio, many hydrophilic proteins will bind with a high affinity to these plates. Binding does, however, tend to be more pH sensitive.



Surfaces for passive binding

Schematic to the left is a representation of the types of biomacromolecules which can be bound to the available modified surfaces. E.g. if a lipid is to be bound the hydrophobic surface PolySorp is most suitable. Based on the physicochemical characteristics of the biomolecule to be immobilized, a surface can be chosen which is appropriate for robust binding. As is indicated in the diagram, MaxiSorp has the widest breadth applications as it is capable of binding the greatest range of molecules.

Passive binding surfaces

| Name | Base Polymer | Hydrophilicity | Binding Preference |
|--|---------------|----------------|--|
| <ul style="list-style-type: none"> ○ PolySorp △ Immulon 1 B* △ Microlite 1+* △ Microfluor 1* △ Universal Binding (UB) | Polystyrene | Low | Biomolecules that have hydrophobic domains, e.g. lipids, lipoproteins, large proteins |
| <ul style="list-style-type: none"> ○ MediSorp* △ Immulon 2 HB* △ Microlite 2+* △ Microfluor 2* | Polystyrene | Fair | Biomolecules with hydrophilic/hydrophobic properties, e.g. medium to large proteins such as albumin. Amphiphilic biomolecules such as LPS |
| <ul style="list-style-type: none"> ○ MaxiSorp* △ Immulon 4 HBX* △ Enhanced Binding (EB)* | Polystyrene | Good | Biomolecules with hydrophilic/hydrophobic properties. Designed for high binding of IgG. Also high binding for many other proteins and biomolecules that have hydrophilic/hydrophobic character |
| <ul style="list-style-type: none"> ○ MultiSorp | Polystyrene | Very good | Hydrophilic biomolecules, e.g. glycoproteins |
| <ul style="list-style-type: none"> ○ TopYield | Polycarbonate | Fair | Proteins with mixed hydrophobic/hydrophilic regions. e.g. immunoglobulins |

○ Thermo Scientific Nunc
 △ Thermo Scientific Microtiter

* Release tested for binding reproducibility. See Approval Criteria Chart on page 12.



| Key Applications | Features |
|---|---|
| Coated antigen ELISA, FIA, LIA | - Lower binding of immunoglobulins: approx. 200-250 ng IgG/cm ² |
| Antibody sandwich ELISA, coated antigen ELISA | <ul style="list-style-type: none"> - Binds proteins - Moderate binding of immunoglobulin: MediSorp 500-600 ng IgG/cm² Immulon 2 HB 350-450 ng IgG/cm² - Lower non-specific binding with samples containing serum or plasma vs. high binding plates |
| Antibody sandwich ELISA, FIA, LIA Coated antigen ELISA, FIA, LIA | <ul style="list-style-type: none"> - Effectively binds a broad range of proteins and biomolecules (broadest range) - High binding plate. Immunoglobulin capacity: approx. 600-650 ng IgG/cm² |
| Coated antigen ELISA | - Protein binding is significantly influenced by pH over the range of 4-10. The pH profile should be examined |
| Immuno PCR | <ul style="list-style-type: none"> - Excellent heat transmission properties - Excellent stability at the elevated temperatures used for PCR - Designed to facilitate Immuno PCR assays |

Abbreviations:

FIA - Fluorescent Immunoassay
LIA - Luminescent Immunoassay
NA - Nucleic Acid

ELISA - Enzyme Linked Immuno Sorbent Assay
PCR - Polymerase Chain Reaction
LPS - Lipopolysaccharide

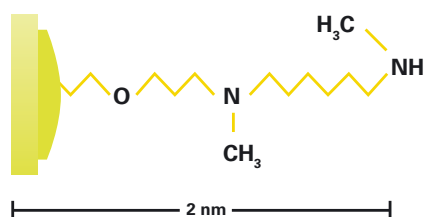
EDC - 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide
CV - Correlation of variation

Covalent Surfaces

Covalent coupling is based on the formation of a single covalent bond between the polymer surface and the biomolecule. Small biomolecules can be immobilized using this technique, as can medium and large molecules that possess the appropriate functional group(s). Since coupling occurs via specific functional groups, biomolecular orientation can also be manipulated by the user.

Thermo Scientific Nunc CovaLink

The CovaLink™ surface is designed to facilitate the coupling of molecules bearing a free carboxyl or phosphate group. Therefore, peptides, haptens and DNA can be coupled. The surface uses a spacer arm to increase accessibility, thereby enhancing overall surface reactivity.

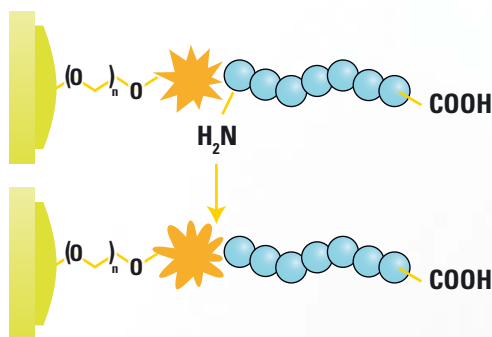


Schematic chemical and physical configuration of the CovaLink NH surface. The NH groups are spaced from the polystyrene surface by 2 nm long (approximately), chemically defined spacer arms, covalently anchored to the surface using a patented method.

Binds biomolecules that have specific functional groups

Thermo Scientific Nunc Immobilizer Amino

The Immobilizer™ Amino surface forms stable covalent bonds between its electrophilic groups and the biomolecule's free amino acids or sulfhydryl groups. Using its unique spacer arm chemistry, the surface provides extremely low non-specific binding to improve assay sensitivity. With no need for an ancillary coupling agent, this surface can simplify your assay development by eliminating the need for a time-consuming blocking step.



Covalent coupling of a peptide to the Immobilizer Amino plate. During a short incubation step, the peptide will bind to the electrophilic group.

The Immobilizer Amino surface is ideal

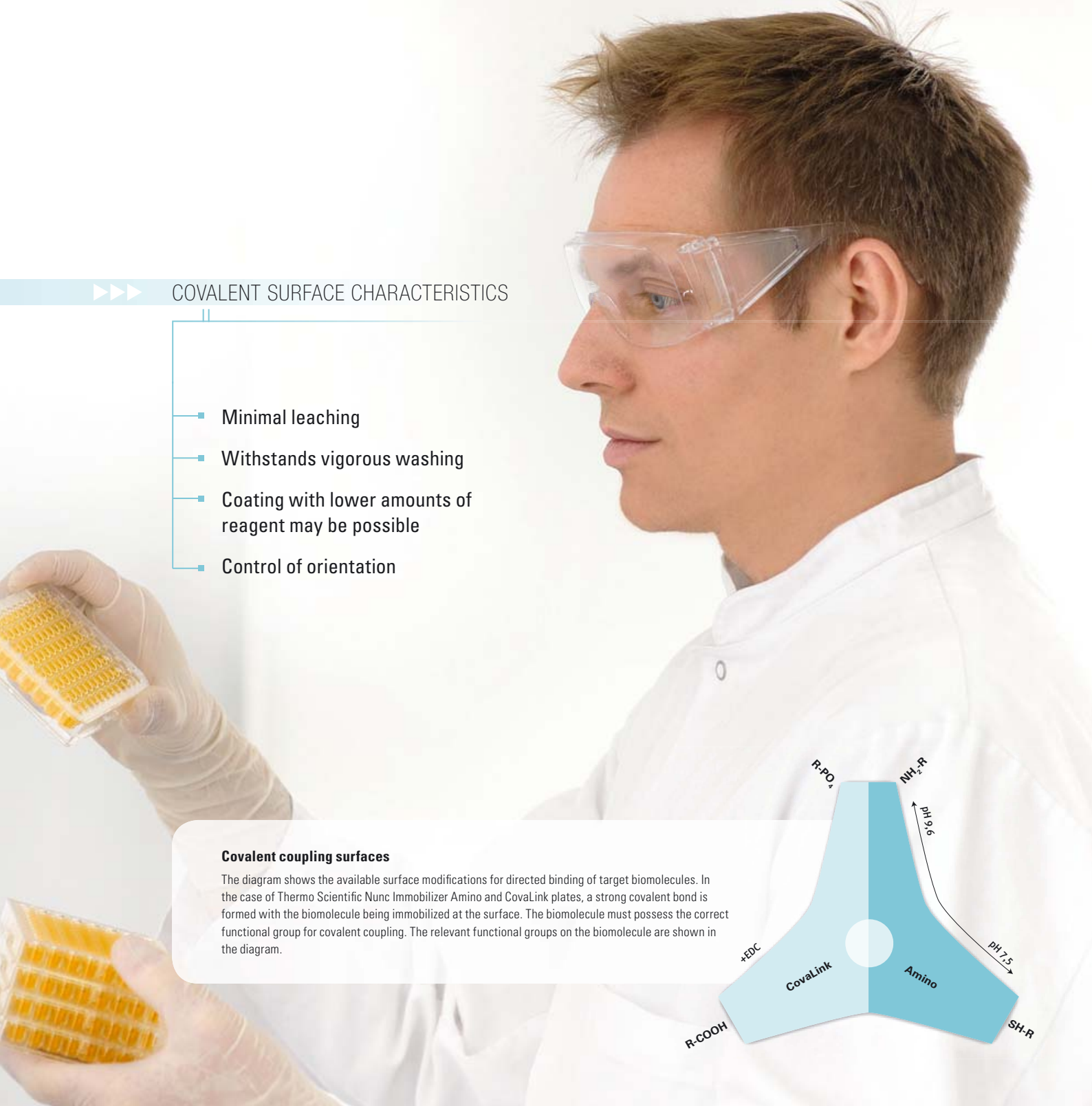
- If your biomolecule does not bind well to a passive surface and it possesses one or more free primary amino or sulfhydryl groups (peptides, oligonucleotides, proteins, proteoglycans)
- To obtain a highly sensitive assay with excellent reproducibility and low background
- To minimize the use of a coating reagent
- To reduce the number of steps required to prepare plates
- To avoid unwanted reactivity associated with a blocking reagent

Covalent Coupling Surfaces

| Name | Base Polymer | Structure | Binding Preference |
|----------------------|---------------------|---|--|
| ○ Immobilizer Amino* | Polystyrene | Reactive electrophilic group tethered on a spacer arm | Covalent coupling of biomolecules with free NH ₂ and/or SH groups e.g. proteins, peptides, aminated oligos |
| ○ CovaLink | Polystyrene | Secondary Amine on a 2 nm spacer arm | Covalent coupling of biomolecules with -COOH or -PO ₄ -groups EDC used for activation of -COOH, PO ₄ -groups |
| ○ NucleoLink | Proprietary Polymer | Proprietary surface chemistry provides functional groups for covalent binding | Covalent binding of 5' phosphorylated or 5' aminated oligonucleotides and nucleic acids using EDC |

○ Thermo Scientific Nunc
 ▲ Thermo Scientific Microtiter

* Release tested for binding reproducibility. See Approval Criteria Chart on page 12.

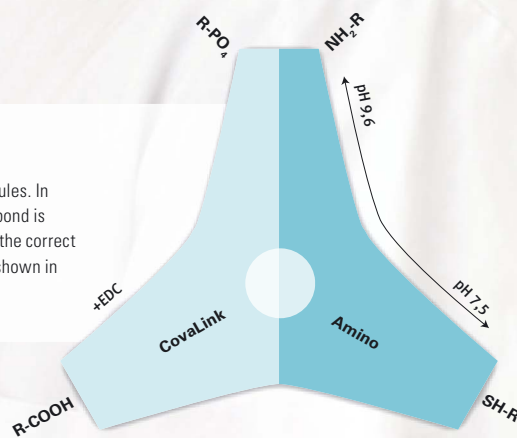


COVALENT SURFACE CHARACTERISTICS

- Minimal leaching
- Withstands vigorous washing
- Coating with lower amounts of reagent may be possible
- Control of orientation

Covalent coupling surfaces

The diagram shows the available surface modifications for directed binding of target biomolecules. In the case of Thermo Scientific Nunc Immobilizer Amino and CovaLink plates, a strong covalent bond is formed with the biomolecule being immobilized at the surface. The biomolecule must possess the correct functional group for covalent coupling. The relevant functional groups on the biomolecule are shown in the diagram.



Key Applications

Features

| | |
|--|---|
| Coated antigen ELISA, FIA, LIA NA Hybridization assays Antibody sandwich ELISA, FIA, LIA | <ul style="list-style-type: none"> - Immobilize proteins and peptides that do not bind to passive surfaces - Stable covalent bond formation with free NH₂ or SH groups via spacer arm technology - NO BLOCKING REQUIRED - Simple one step protocol. Add coating solution and incubate - Can frequently reduce the amount of biomolecule needed for coating vs passive plate - High signal-to-noise ratio |
| Coated antigen ELISA, LIA, FIA | <ul style="list-style-type: none"> - Can link biomolecules via the COOH group (enables the detection of peptides that bind to an antibody via the NH₂ end) - Spacer arm technology for optimal orientation |
| Solid Phase PCR, DIAPOPS (Detection of Immobilized Amplified Products), PCR ELISA, NA Hybridization assays | <ul style="list-style-type: none"> - Heat-stable wells (120°C) with excellent thermal transfer properties - Simplifies PCR assisted hybridization assays; perform the PCR amplification and detection steps in the same well. No need for special real-time PCR equipment - Read in spectrophotometers |

Abbreviations:

FIA - Fluorescent Immunoassay
 LIA - Luminescent Immunoassay
 NA - Nucleic Acid

ELISA - Enzyme Linked Immuno Sorbent Assay
 PCR - Polymerase Chain Reaction
 LPS - Lipopolysaccharide

EDC - 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide
 CV - Correlation of variation

Affinity Capture Surfaces

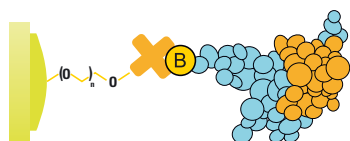
Affinity capture is based on the specific binding of a tagged biomolecule to its receptor. The plate surface is therefore developed with one of the binding pair (the receptor) immobilized on its surface, while the tag is linked to a biomolecule either by chemical coupling or genetic engineering. The tagged biomolecule can then be captured on the plate surface with a high degree of specificity.

Thermo Scientific Nunc Passive Streptavidin

Streptavidin is passively coated on the plate with a biotin binding capacity of at least 13-20 pmol per well.

Thermo Scientific Nunc Immobilizer Streptavidin

The streptavidin protein molecules are covalently bound to the surface via a spacer arm to reduce leaching and enhance precision. The surface is also modified to minimize non-specific binding. As a result, a high S/N ratio is produced, for increased sensitivity. A biotin binding capacity of 20 pmol per well produces excellent analytical results.

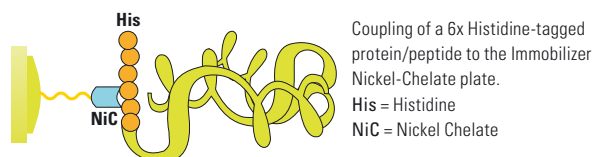


Coupling of a biotinylated protein to the covalently bound streptavidin. After a pre-wash, simply add the biotinylated target molecule in an appropriate buffer. In a short incubation step, the biotinylated molecule will bind to the streptavidin molecule.

All covalent and affinity capture surface plates are room temperature stable and are ready to use.

Thermo Scientific Nunc Immobilizer Nickel Chelate

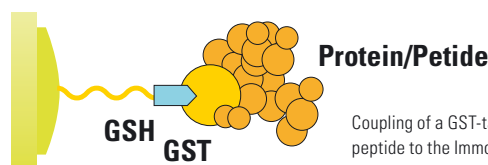
A nickel chelate group is attached to the polymer surface via a spacer arm and will bind polyhistidine, which is typical genetically engineered into a fusion protein. The spacer arm design maximizes the reactivity of the surface, while minimizing non-specific binding, and covalent linkage significantly reduces leaching. The surface does not need to be blocked and therefore produces a high S/N ratio.



Coupling of a 6x Histidine-tagged protein/peptide to the Immobilizer Nickel-Chelate plate.
His = Histidine
NiC = Nickel Chelate

Thermo Scientific Nunc Immobilizer Glutathione

A GST peptide, attached to the polymer surface via a spacer arm, will bind glutathione, which is typical genetically engineered into a fusion protein. The spacer arm maximizes surface reactivity while minimizing non-specific binding, and the covalent linkage reduces the occurrence of leaching. The surface does not need to be blocked and therefore a high S/N ratio is obtained.



Coupling of a GST-tagged protein/peptide to the Immobilizer Glutathione plates.
GSH = Glutathione
GST = Glutathione-S-transferase

Affinity Capture Surfaces

| Name | Base Polymer | Structure | Binding Preference |
|---------------------------------|--------------|---|--|
| ○ Immobilizer Streptavidin* | Polystyrene | Streptavidin covalently coupled to polystyrene surface via a spacer arm | Biotinylated biomolecules |
| ○ Immobilizer Ni Chelate* | Polystyrene | Ni Chelate covalently coupled to polystyrene surface via a spacer arm | 6-His tagged fusion proteins |
| ○ Immobilizer Glutathione* | Polystyrene | Glutathione covalently coupled to polystyrene surface via a spacer arm | Glutathione-S-transferase tagged fusion proteins |
| ○ Passively coated Streptavidin | Polystyrene | Streptavidin passively coated | Biotinylated biomolecules |

○ Thermo Scientific Nunc
△ Thermo Scientific Microtiter

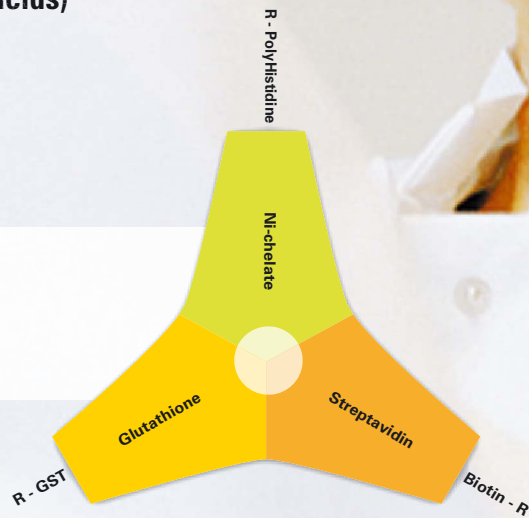
* Release tested for binding reproducibility. See Approval Criteria Chart on page 12.

▶▶ AFFINITY CAPTURE SURFACE CHARACTERISTICS

- **Highly specific binding**
- **Reduced variability in molecular orientation**
- **Immobilizer surfaces improve signal to noise ratios**
- **Streptavidin biotin interaction can be exploited to immobilize a wide range of biomolecules (proteins, peptides, haptens, nucleic acids)**

Affinity capture surfaces

The diagram shows the available surface modifications for directed binding of target biomolecules.



Key Applications

Features

Immunoassays, protein-protein binding assays, PCR ELISA, NA Hybridization assays

- NO BLOCKING REQUIRED due to unique surface chemistry
- High sensitivity; very high signal-to-noise ratio
- Stable at room temperature
- Biotin capacity (20 pMol/well provides large dynamic range for analytical assays)

Protein-protein and protein-nucleic acid binding assays, immunoassays

- High sensitivity; very high signal-to-noise ratio
- NO BLOCKING REQUIRED due to unique surface chemistry
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- High sensitivity; very high signal-to-noise ratio
- NO BLOCKING REQUIRED due to unique surface chemistry
- Stable at room temperature

Immunoassays, protein-protein binding assays, PCR ELISA, NA Hybridization assays

- Nunc passively coated Streptavidin - Biotin capacity: ≥ 13 pMol biotin per well, stable at room temperature

Abbreviations:

FIA - Fluorescent Immunoassay
LIA - Luminescent Immunoassay
NA - Nucleic Acid

ELISA - Enzyme Linked Immuno Sorbent Assay
PCR - Polymerase Chain Reaction
LPS - Lipopolysaccharide

EDC - 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide
CV - Correlation of variation



Approval Criteria

Thermo Scientific Nunc and Microtiter plate surfaces are release tested using a binding assay that employs IgG or other appropriate biomolecule (for 96 well solid and module/strip plates).

| Name | Surface | Specification |
|-------------------|---|---|
| Nunc | MaxiSorp | Clear wells Well-to-well % CV of less than 5% for IgG binding: all results are $\pm 10\%$ from the mean for the lot Black and White wells Well-to-well % CV of less than 10% for IgG binding |
| | MediSorp | Well-to-well % CV of less than 5% for IgG binding: all results $\pm 10\%$ from the mean for the lot |
| | Immobilizer Amino | Well-to-well % CV of less than 5% for clear plates Well-to-well % CV of less than 10% for white and black plates |
| | Immobilizer Streptavidin | Well-to-well % CV of less than 10% for clear plates Well-to-well % CV of less than 7.5% for white and black plates |
| | Immobilizer Glutathione | Well-to-well % CV of less than 5% for clear plates Well-to-well % CV of less than 10% for white and black plate |
| | Immobilizer Ni Chelate | Well-to-well % CV of less than 5% for clear plates Well-to-well % CV of less than 10% for white and black plates |
| | Passively coated Streptavidin | Capacity ≥ 13 pMol Biotin/well (Biotin-HRP) |
| | CovaLink NH Modules | Well-to-well % CV of less than 10% (clear 96 and strip plate) using a peptide binding assay: results $\pm 15\%$ from the mean for the lot |
| | NucleoLink | Well-to-well % CV of less than 10% using an oligonucleotide binding assay |
| Microtiter | Immulon 1B Immulon 2HB Microlite 1+, Microlite 2+ Microfluor 1, Microfluor 2 | Well-to-well % CV $\leq 8.5\%$ for IgG binding |
| | Immulon 4HBX | Well-to-well % CV $\leq 5.5\%$ for IgG binding |
| | Enhanced Binding (EB) | Well-to-well % CV less than 5% for IgG binding |

Immunoassay Products



Solid plates



Framed modules/strips



Loose modules/strips



Tubes



Immuno Sticks



ACCESSORIES



Sealing tapes



Lids



Strip caps



Frames



Push-out tool



Immuno Washers



Color coding

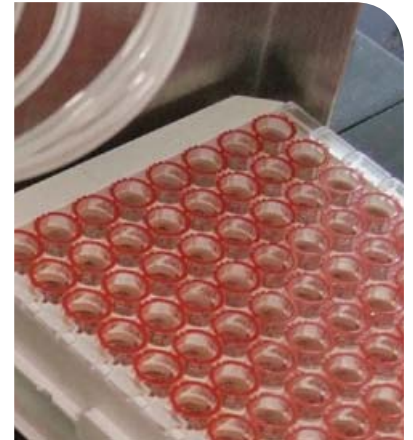


Reservoirs



Custom Coating of MicroWell™ Plates

Decrease your time to market with proven development and manufacturing



Optimize Your Opportunities

Increase production capacity

- Global manufacturing enables regional fulfilment and shorter lead times
- Use an independent coating facility
- Avoid backorders

Leverage resources

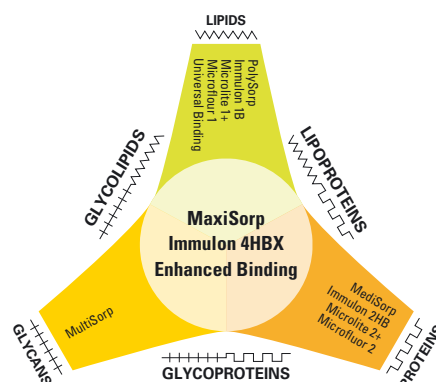
- Reduce investments
- Focus on value-added projects
- Allocate assets effectively

Mimimize time to market

- Leverage our proven strengths in:
 - Surface treatments
 - Surface capabilities
 - Production
- Improve output

Surfaces for passive binding

Schematic representation of the types of biomacromolecules, which can be bound to the available modified surfaces. E.g. if a lipid is to be bound the hydrophobic surface PolySorp plates is most suitable. Based on the physicochemical characteristics of the biomolecule to be immobilized, a surface can be chosen, which is appropriate for robust binding. As is indicated in the diagram, MaxiSorp has the widest breadth applications as it is capable of binding the greatest range of molecules.





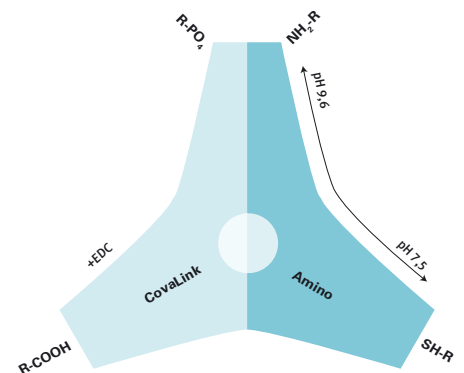
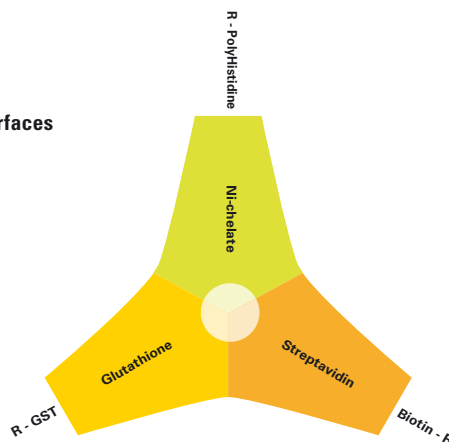
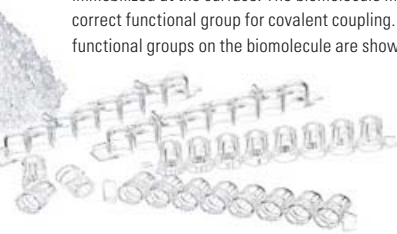
Quality Control

Our highly skilled QC and QA technicians are available to provide documentation necessary to fulfil your requirements. Our certified facilities assures a high consistency and quality throughout the entire process.



Covalent coupling surfaces and affinity capture surfaces

The diagram shows the available surface modifications for directed binding of target biomolecules. In the case of Thermo Scientific Nunc Immobilizer Amino and CovaLink plates, a strong covalent bond is formed with the biomolecule being immobilized at the surface. The biomolecule must possess the correct functional group for covalent coupling. The relevant functional groups on the biomolecule are shown in the diagram.



Product Overview

Passive Binding Surface Products

| | Surface | Cat. No. | Configuration | Design | Product Line | Color | Total volume, μ l/well | Units per pack/case | |
|----------------------|--|----------------------|---------------|---------------|----------------|-------------|----------------------------|---------------------|---------|
| Hydrophobic | Solid 96 Well Plates | PolySorp | 456529 | F96 | High Flange | Nunc | Clear | 400 | 10/180 |
| | | PolySorp | 475094 | F96 | Pinchbar | Nunc | Clear | 400 | 5/60 |
| | | PolySorp | 446140 | C96 | Pinchbar | Nunc | Clear | 350 | 5/60 |
| | | PolySorp | 475434 | U96 | High Flange | Nunc | Clear | 300 | 5/60 |
| | | PolySorp | 437869 | C96 | Pinchbar | Nunc | Clear | 350 | 5/60 |
| | | PolySorp | 437112 | F96 | Pinchbar | Nunc | Black | 400 | 10/80 |
| | | PolySorp | 437842 | C96 | Pinchbar | Nunc | White | 350 | 5/60 |
| | | PolySorp | 436111 | F96 | Pinchbar | Nunc | White | 400 | 10/80 |
| | | Immulon 1 B | 3355 | F96 | Regular Flange | Microtiter | Clear | 330 | 10/50 |
| | | Immulon 1 B | 3555 | U96 | Regular Flange | Microtiter | Clear | 280 | 10/50 |
| | | Universal Binding | 9502227 | F96 | Regular Flange | Microtiter | Clear | 450 | 25/50 |
| | | Universal Binding | 95029780 | F96 | Regular Flange | Microtiter | Clear | 450 | 1/40 |
| | | Universal Binding | 9502887 | F96 | Regular Flange | Microtiter | White | 450 | 50 |
| | | Universal Binding | 9502867 | F96 | Regular Flange | Microtiter | Black | 450 | 50 |
| | | Microfluor 1 | 7605 | F96 | Regular Flange | Microtiter | Black | 330 | 50 |
| | | Microfluor 1 | 7705 | F96 | Regular Flange | Microtiter | White | 330 | 50 |
| | | Microfluor 1 | 7005 | U96 | Regular Flange | Microtiter | Black | 330 | 50 |
| | | Microfluor 1 | 6905 | U96 | Regular Flange | Microtiter | White | 330 | 50 |
| | | Microlite 1+ | 7571 / 7416 | F96 | Regular Flange | Microtiter | White | 330 | 50 |
| | Assembled Strip/Module Plates 96 Wells | PolySorp | 467679 | F16 | Non Breakable | Nunc | Clear | 400 | 10/60 |
| | | PolySorp | 466966 | U16 | Non Breakable | Nunc | Clear | 300 | 10/60 |
| | | PolySorp | 473717 | C12 | Non Breakable | Nunc | Clear | 350 | 10/60 |
| | | PolySorp | 469078 | F8 | Non Breakable | Nunc | Clear | 400 | 10/60 |
| | | PolySorp | 444865 | C8 | Non Breakable | Nunc | Clear | 350 | 10/60 |
| | | PolySorp | 475086 | U8 | Non Breakable | Nunc | Clear | 300 | 10/60 |
| | | PolySorp | 441254 | C8 Star | Non Breakable | Nunc | Clear | 380 | 10/60 |
| | | PolySorp | 446442 | C8 | Breakable | Nunc | Clear | 350 | 10/60 |
| | | PolySorp | 446477 | U8 | Breakable | Nunc | Clear | 320 | 10/60 |
| | | PolySorp | 448496 | C8 Star | Breakable | Nunc | Clear | 330 | 10/60 |
| | | PolySorp | 473539 | C8 | Breakable | Nunc | Clear | 350 | 10/60 |
| | | PolySorp | 463200 | C8 | Breakable | Nunc | White | 350 | 10/60 |
| | | PolySorp | 446473 | C8 | Breakable | Nunc | Black | 350 | 10/60 |
| | | PolySorp | 475523 | F16 | Non Breakable | Nunc | Black | 400 | 10/60 |
| | | PolySorp | 437702 | C8 | Non Breakable | Nunc | White | 350 | 10/60 |
| Immulon 1 B | | 6310 | F12 | Non Breakable | Microtiter | Clear | 350 | 100/100 | |
| Immulon 1 B | | 6505 | F16 | Non Breakable | Microtiter | Clear | 330 | 25/100 | |
| Universal Binding | | 95029390 | F8 | Breakable | Microtiter | Clear | 400 | 25/50 | |
| Universal Binding | | 95029350 | F8 | Non Breakable | Microtiter | Clear | 330 | 25/50 | |
| Universal Binding | | 95029510 | F8 | Non Breakable | Microtiter | White | 330 | 25/50 | |
| Universal Binding | | 95029450 | F8 | Non Breakable | Microtiter | Black | 330 | 25/50 | |
| Microlite 1+ | | 7561 | F12 | Non Breakable | Microtiter | White | 380 | 100/100 | |
| 384 Well Plates | | Immulon 1 B | 8555 | RS384 | Regular Flange | Microtiter | Clear | 120 | 10/50 |
| | | Immulon 1 B | 8755 | RS384 | Regular Flange | Microtiter | Clear | 120 | 10/50 |
| Slightly hydrophilic | | Solid 96 Well Plates | MediSorp | 467320 | F96 | High Flange | Nunc | Clear | 400 |
| | Immulon 2 HB | | 3455 | F96 | Regular Flange | Nunc | Clear | 330 | 10/50 |
| | Immulon 2 HB | | 3655 | U96 | Regular Flange | Microtiter | Clear | 280 | 10/50 |
| | Assembled Strip/Module Plates 96 Wells | MediSorp | 467120 | F8 | Non Breakable | Nunc | Clear | 400 | 10/60 |
| | | MediSorp | 446470 | C8 | Breakable | Nunc | Clear | 350 | 10/60 |
| | | Immulon 2 HB | 6309 | F12 | Non Breakable | Microtiter | Clear | 350 | 100/100 |
| | | Immulon 2 HB | 6506 | F16 | Non Breakable | Microtiter | Clear | 330 | 25/100 |

Please check with your local sales representative whether the product you are interested in is available in your country

| | | Surface | Cat. No. | Configuration | Design | Product Line | Color | Total volume, μ l/well | Units per pack/case |
|--------------------|--|--|---------------|---------------|----------------|---------------|---------|----------------------------|---------------------|
| Hydrophilic | Solid 96 Well Plates | MaxiSorp | 430341 | C96 | Pinchbar | Nunc | Clear | 350 | 5/60 |
| | | MaxiSorp | 446612 | C96 | Pinchbar | Nunc | Clear | 350 | 5/60 |
| | | MaxiSorp | 437958 | C96 | Pinchbar | Nunc | Clear | 350 | 5/60 |
| | | MaxiSorp | 437796 | C96 | Pinchbar | Nunc | White | 350 | 5/60 |
| | | MaxiSorp | 456537 | F96 | High Flange | Nunc | Clear | 400 | 10/180 |
| | | MaxiSorp | 460984 | F96 | High Flange | Nunc | Clear | 400 | 10/180 |
| | | MaxiSorp | 439454 | F96 | Pinchbar | Nunc | Clear | 400 | 5/60 |
| | | MaxiSorp | 442404 | F96 | Pinchbar | Nunc | Clear | 400 | 5/60 |
| | | MaxiSorp | 449824 | U96 | High Flange | Nunc | Clear | 300 | 5/60 |
| | | MaxiSorp | 437111 | F96 | Pinchbar | Nunc | Black | 400 | 10/80 |
| | | MaxiSorp | 437796 | C96 | Pinchbar | Nunc | White | 350 | 5/60 |
| | | MaxiSorp | 436110 | F96 | Pinchbar | Nunc | White | 400 | 10/80 |
| | | Immulon 4 HBX | 3855 | F96 | Regular Flange | Microtiter | Clear | 330 | 10/50 |
| | | Enhanced Binding | 95029330 | F96 | Regular Flange | Microtiter | Clear | 450 | 25/50 |
| | | Microflour 2 | 7805 | F96 | Regular Flange | Microtiter | Black | 330 | 50 |
| | | Microflour 2 | 7905 | F96 | Regular Flange | Microtiter | White | 330 | 50 |
| | | Microflour 2 | 7205 | U96 | Regular Flange | Microtiter | Black | 330 | 50 |
| | | Microflour 2 | 7105 | U96 | Regular Flange | Microtiter | White | 330 | 50 |
| | | Microlite 2+ | 7572 / 7417 | F96 | Regular Flange | Microtiter | White | 330 | 50 |
| | Assembled Strip/Module Plates 96 Wells | MaxiSorp | 469914 | F16 | Non Breakable | Nunc | Clear | 400 | 80/320 |
| | | MaxiSorp | 469264 | U16 | Non Breakable | Nunc | Clear | 300 | 80/320 |
| | | MaxiSorp | 469949 | F8 | Non Breakable | Nunc | Clear | 400 | 160/640 |
| | | MaxiSorp | 467466 | F16 | Non Breakable | Nunc | Clear | 400 | 10/60 |
| | | MaxiSorp | 464394 | U16 | Non Breakable | Nunc | Clear | 300 | 10/60 |
| | | MaxiSorp | 473709 | C12 | Non Breakable | Nunc | Clear | 350 | 10/60 |
| | | MaxiSorp | 468667 | F8 | Non Breakable | Nunc | Clear | 400 | 10/60 |
| | | MaxiSorp | 434797 | F8 | Non Breakable | Nunc | Clear | 400 | 20/120 |
| | | MaxiSorp | 445101 | C8 | Non Breakable | Nunc | Clear | 350 | 10/60 |
| | | MaxiSorp | 475078 | U8 | Non Breakable | Nunc | Clear | 300 | 10/60 |
| | | MaxiSorp | 441653 | C8 Star | Non Breakable | Nunc | Clear | 380 | 10/60 |
| | | MaxiSorp | 446469 | C8 | Breakable | Nunc | Clear | 350 | 10/60 |
| | | MaxiSorp | 446639 | U8 | Breakable | Nunc | Clear | 320 | 10/60 |
| | | MaxiSorp | 448526 | C8 Star | Breakable | Nunc | Clear | 330 | 10/60 |
| MaxiSorp | | 473768 | C8 | Breakable | Nunc | Clear | 350 | 10/60 | |
| MaxiSorp | | 437915 | C12 | Non Breakable | Nunc | Clear | 350 | 10/60 | |
| MaxiSorp | | 475515 | F16 | Non Breakable | Nunc | Black | 400 | 10/60 | |
| MaxiSorp | | 437591 | C8 | Non Breakable | Nunc | White | 350 | 10/60 | |
| MaxiSorp | | 463201 | C8 | Breakable | Nunc | White | 350 | 10/60 | |
| MaxiSorp | | 446471 | C8 | Breakable | Nunc | Black | 350 | 10/60 | |
| Immulon 4 HBX | | 6405 | F12 | Non Breakable | Microtiter | Clear | 350 | 100/100 | |
| Immulon 4 HBX | | 6508 | F16 | Non Breakable | Microtiter | Clear | 330 | 25/100 | |
| Enhanced Binding | | 95029100 | F8 | Non Breakable | Microtiter | Clear | 330 | 5/50 | |
| Enhanced Binding | | 95029180 | F8 | Breakable | Microtiter | Clear | 400 | 25/50 | |
| Microlite 2+ | 7562 | F12 | Non Breakable | Microtiter | White | 380 | 100/100 | | |
| 384 Well Plates | Maxisorp | 460518 | F384 | Pinchbar | Nunc | Black | 120 | 10/30 | |
| | Maxisorp | 464718 | F384 | Pinchbar | Nunc | Clear | 120 | 10/30 | |
| | Maxisorp | 460372 | F384 | Pinchbar | Nunc | White | 120 | 10/30 | |
| Highly hydrophilic | Solid 96 Well Plates | MultiSorp | 467340 | F96 | High Flange | Nunc | Clear | 400 | 5/60 |
| | | Assembled Strip/Module Plates 96 Wells | MultiSorp | 467140 | F8 | Non Breakable | Nunc | Clear | 400 |
| | MultiSorp | | 446490 | C8 | Breakable | Nunc | Clear | 350 | 10/60 |

Product Overview

Covalent Surface Products

| | | Surface | Cat. No. | Configuration | Design | Product Line | Color | Total volume, µl/well | Units per pack/case |
|----------|---|----------------------|----------|---------------|---------------|--------------|-------|-----------------------|---------------------|
| Covalent | Solid 96 Well Plates – Clear, Black and White | Immobilizer Amino | 436006 | F96 | Pinchbar | Nunc | Clear | 400 | 5/30 |
| | | Immobilizer Amino | 436007 | F96 | Pinchbar | Nunc | White | 400 | 5/30 |
| | | Immobilizer Amino | 436008 | F96 | Pinchbar | Nunc | Black | 400 | 5/30 |
| | Assembled Strip/Module Plates 96 Wells Clear, Black and White | Immobilizer Amino | 436013 | F8 | Non Breakable | Nunc | Clear | 400 | 5/30 |
| | | Immobilizer Amino | 436023 | C8 | Breakable | Nunc | Clear | 350 | 5/30 |
| | | Immobilizer CovaLink | 478042 | F8 | Non Breakable | Nunc | Clear | 400 | 5/30 |

Affinity Capture Surface Products

| | | Surface | Cat. No. | Configuration | Design | Product Line | Color | Total volume, µl/well | Units per pack/case |
|------------------|--|-------------------------------|----------|---------------|---------------|--------------|-------|-----------------------|---------------------|
| Affinity Capture | Solid 96 Well Plates – Clear, Black and White | Immobilizer Streptavidin | 436015 | F96 | Pinchbar | Nunc | White | 400 | 1/15 |
| | | Immobilizer Streptavidin | 436016 | F96 | Pinchbar | Nunc | Black | 400 | 1/15 |
| | | Immobilizer Streptavidin | 436014 | F96 | Pinchbar | Nunc | Clear | 400 | 1/15 |
| | | Immobilizer Nickel-Chelate | 436024 | F96 | Pinchbar | Nunc | Clear | 400 | 1/15 |
| | | Immobilizer Nickel-Chelate | 436027 | F96 | Pinchbar | Nunc | Black | 400 | 1/15 |
| | | Immobilizer Glutathione | 436032 | F96 | Pinchbar | Nunc | Clear | 400 | 1/15 |
| | | Immobilizer Glutathione | 436033 | F96 | Pinchbar | Nunc | White | 400 | 1/15 |
| | | Immobilizer Glutathione | 436034 | F96 | Pinchbar | Nunc | Black | 400 | 1/15 |
| | Passively coated Streptavidin | 236001 | C96 | Pinchbar | Nunc | Clear | 350 | 1/15 | |
| | Assembled Strip/Module Plates 96 Wells – Clear | Immobilizer Streptavidin | 436020 | F8 | Pinchbar | Nunc | Clear | 400 | 1/15 |
| | | Immobilizer Streptavidin | 436022 | C8 | Breakable | Nunc | Clear | 350 | 1/15 |
| | | Passively coated Streptavidin | 236004 | C8 | Non Breakable | Nunc | Clear | 350 | 1/15 |
| | | BioBind-Streptavidin | 95029263 | F8 | Non Breakable | Microtiter | Clear | 330 | 1/5 |
| | | BioBind-Streptavidin | 95029293 | F8 | Breakable | Microtiter | Clear | 400 | 1/5 |

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