# STREPTAVIDIN COATED SURFACE –HIGH BINDING CAPACITY

HB streptavidin coated plate is a powerful and universal instrument for binding any biotinylated molecule (Proteins-Peptides-Polysaccharides-Oligonucleotides-DNA fragments-etc.).
Biotin is a small molecule which can be conjugated to many proteins without losing or altering their activity, each protein can bind many biotin molecules.
Since each subunit of streptavidin binds one molecule of biotin, the resulting effect is a great increase of the sensitivity of the assay.
Unlike the normal Streptavidin coated, these plates are particularly useful in competitive tests to measure biotinylated low molecular weight molecules.

**Product specifications**

**Available configurations**
96-well microplates, solid or with 12 removable 8-well strips.

**Coating**
HB Streptavidin is coated using 100 µl/well. The strips are post-coated (blocked) for low non specific binding and long-term stability.

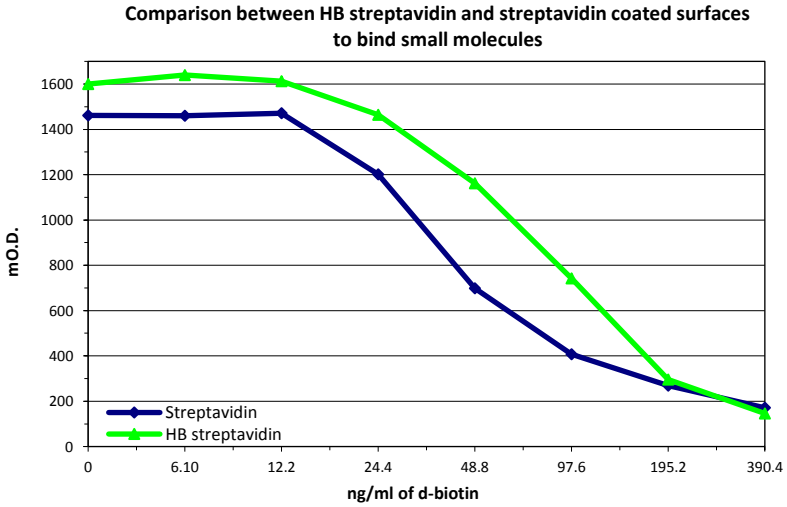
**Uniformity**
HB Streptavidin microplates show a CV% less than 5when used as a catcher of biotin-HRP as detector in an ELISA format using TMB as substrate.

**Storage and Stability**
The HB Streptavidin microplates, if unopened, are stable at 2-8°C until the expiration date printed on the label. If opened, store in closed pouch with desiccant and use within the expiration date.

## TECHNICAL NOTE N. 31

**1. comparison between HB streptavidin and streptavidin coated surfaces to bind small molecules (biotin, MW= 244)**

HB streptavidin and streptavidin coated wells were incubated with biotin solutions (from 0 to 390.4 ng/ml) containing 2 ng/ml of biotinylated peroxidase for 30' R.T.
After the washing step, the wells were incubated with TMB and blocked with sulphuric acid 1N.
The O.D. values were read at 450 nm.




The two microplates show different binding curves towards biotin.

**Streptavidin** coated plate shows a binding capacity of ~ 2.2 ng*/ well (100 µl volume)
*2.2 ng d-biotin = 9 pmol

**HB streptavidin** coated plate shows a binding capacity of ~ 9 ng**/ well (100 µl volume)
** 9 ng d-biotin = 37 pmol

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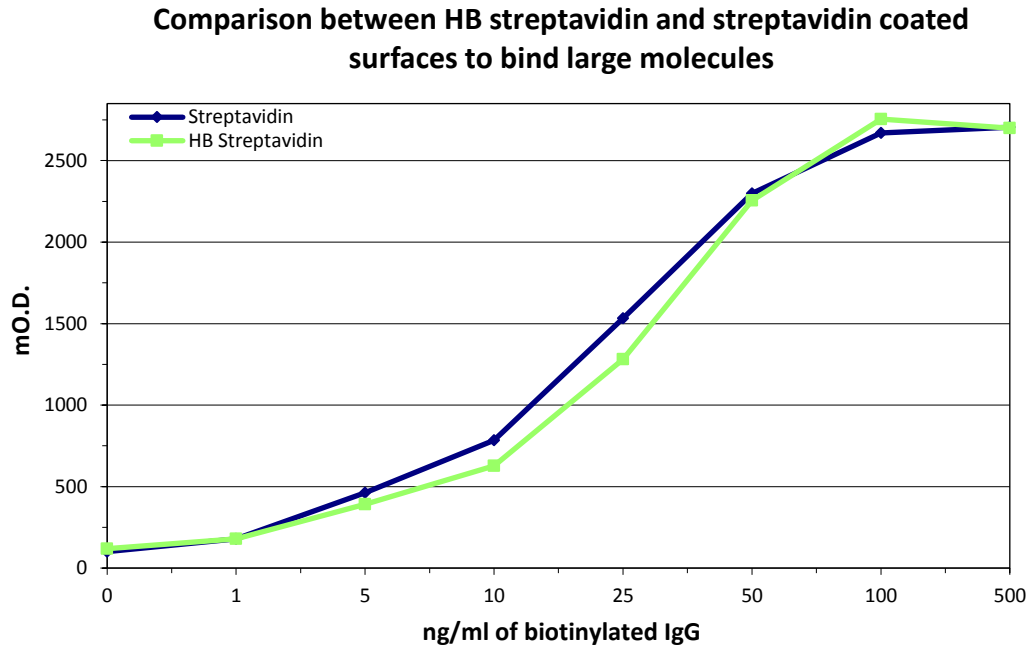
| Binding capacity of HB streptavidin coated plate | > 35 pmol/ well (100 µl volume) |

## 2. comparison between HB streptavidin and streptavidin coated surfaces to bind large molecules (IgG, MW= 150.000)

HB streptavidin coated wells were incubated with solutions (from 0 to 500 ng/ml) of biotinylated HIgG for 30' R.T. After a washing step, the wells were incubated with AHIgG-Pod for 30' R.T., again washed and incubated with TMB and blocked with sulphuric acid 1N.
The OD values were read at 450 nm.
The two microplates show the same bond curve towards biotinylated HIgG and they are saturated from the concentration of 100 ng/ml biotinylated HIgG.




## 3. Uniformity of biotin binding

Test conditions:

- A 96 wells plate was incubated with 2 ng/ml of biotinylated peroxidase
- After a washing step, the plate was incubated with the TMB, then the reaction was stopped adding sulphuric acid 1N
- The optical density was determined at 450 nm and used for calculating the CV%

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| uniformity | CV% < 5 |