COATED PCR TUBES & PLATES

PCR products: 8 strip tubes and plates are generally made of polypropylene (PP). While PP features of temperature resistance and low binding capacity fit with the needs of PCR protocol, some recent techniques as e.g. NGS, require additional binding properties.

THANKS TO OUR EXPERTISE IN SURFACE MODIFICATION,
WE DEVELOPED A RANGE OF COATED PCR PRODUCTS

- Streptavidin
- Streptavidin HB
- Carboxylated
- Maleimide
- Protein A
- Protein G
- Protein A-G

biomat

STREPTAVIDIN

Streptavidin coated surfaces offer a powerful and universal instrument for binding any *biotinylated molecule* (Proteins-Peptides-Polysaccharides-Oligonucleotides-DNA fragments-etc.). Streptavidin is a tetrameric protein (M.W. 60 kDa) with very high affinity for *biotin*; the bond is the **strongest** known **non-covalent biological interaction**.

The streptavidin-biotin bonding main features are:

- stability·
- specificity
- affinity

This feature make this coating suitable for special applications of molecules which do not offer reliable bonding by passive adsorption or adsorb in a unfavorable orientation.

SURFACE PROPERTIES	Streptavidin is coated using 100 µl/tube. The PCR products are post-coated (blocked) for low non specific binding and long-term stability. The binding capacity is **~ 5-6 pMol** dbiotin/tube.

STREPTAVIDIN HB

The **high binding streptavidin coated surfaces,** unlike normal streptavidin, are particularly useful in competitive tests to measure biotinylated low molecular weight molecules.

SURFACE PROPERTIES	HB Streptavidin is coated using 100 µl/tube. The PCR products are post-coated (blocked) for low non specific binding and long-term stability. The binding capacity is **>20 pMol** d-biotin/tube.

MALEIMIDE

Maleimide coated surfaces offer a powerful instrument for binding biomolecules containing *free sulfhydryl groups* (e.g. peptides that contains a terminal cysteine or thiols containg haptens) or *reducible disulfide bonds*. It is also very useful tool for assay requiring site-directed orientation.

SURFACE PROPERTIES	A derived maleimide is coated using 100 µl/well. The products are post-coated (blocked) for low non specific binding and long-term stability.

CARBOXYLATED

Surfaces with carboxylic groups covalently bound are dedicated to promote the covalent immobilization of compounds containing reactive *free amino groups* using the EDC mediated amination. This kind of immobilization can overcome some of the limitations connected with physical adsorption of the molecules to the surfaces:

- immobilization of molecules which are bound weakly or not at all by physical adsorption, namely small peptides (M.W. 1000-5000 Da) drugs, toxins or hormones
- oriented immobilization of molecules in order to secure the integrity and accessibility of their specific sites

SURFACE PROPERTIES	The surface is modified with carboxylic groups; the volume of treatment is 200 µl/well. The amino group present in any molecules, such as peptides or proteins, binds to Biomat COOH through formation of amide bonds between the amino group presents in the molecule and the surface carboxylic group by the action of carbodiimide.

PROTEIN A, G & A/G

Protein A, Protein G , Protein A/G are coated in combination with a protein to block non-specific binding sites and to maintain stable activity. These coated surfaces are designed to capture specific and sterical oriented *IgG* applied directly or as antigen/antibody complex. Protein A, G and A/G specifically bind the Fc region of immunoglobulins of many mammalian species with different degrees of binding strength, with an orientation that allows the F(ab)2 binding sites to be freely available for efficient binding to epitope. When coated onto PCR products, the Protein A, G and A/G can capture IgG applied directly or as antigen/antibody complexes.

SURFACE PROPERTIES	**Recombinant Protein A** (M.W. 38.9 kDa), from *Staphylococcus aureus sub sp. Aureus*, expressed in *E. coli* **Recombinant Protein G** (M.W. 26.1 kDa), from *Streptococcus* sp., expressed in *E. coli* **Recombinant Protein A/G** (M.W. 50.4 kDa) is a fusion protein between Protein A and Protein G. The Protein A portion is from *Staphylococcus aureus* segments E, D, A, B and C and the Protein G portion is from Streptococcus sp. segments C1 and C3, expressed in *E. coli*, are coated using 100 µl/tube. The PCR products are post-coated (blocked) for low non specific binding and long-term stability.

For more information visit *www.biomat.it*

biomat

CONTACTS

info@biomat.it
www.biomat.it

BIOMAT SRL

Via Trento 124
38061 Ala (TN) Italy
ph. +39 0464 357951
fax +39 0464 357964