BioTeZ Berlin-Buch GmbH
Biochemisch-Technologisches-Zentrum

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General User Information

Polystreptavidin R

Manufacturer:
BioTeZ Berlin-Buch GmbH (DE)

Order Code:
Polystrept R

Background:
Streptavidin binds very tightly to the small molecule Biotin. Streptavidin coating of solid phase's offers a universal immobilization principle for the detection and analysis of proteins, peptides, PCR-fragments, haptens etc., which must be present in a biotinylated form.
As a further development BioTeZ offers a polymerized Streptavidin, the Polystreptavidin R, characterized by an extraordinary high Biotin binding capacity. Coatings made of Polystrept R combine the excellent binding capacity with a high chemo and thermo stability. It is very suitable for coating membranes, beads, biochips, plastics etc.

Description:
Polystreptavidin R is a coating solution concentrate.

General instructions for adsorptive coating:
Polystreptavidin R is to be used in diluted form. For this, use a neutral buffer solution (e.g. phosphate buffered saline, PBS). Avoid basic solutions above pH 8.
The coating concentration has to be optimized for the respective application. The following concentration ranges are used as a guideline:

10 – 50 µg/mL for coating of microplates

10 – 200 µg/mL for coating of biochips, beads, membrans etc.

It is recommended that the coating process is carried out overnight (about 18 hours) at room temperature. This should take place under mild agitation, especially when small particles such as beads to be coated. It can be done for example on a wobble roller mixer.

After the coating, the Polystreptavidin R solution should be aspirated and the material is thoroughly washed with distilled water or sodium chloride solution (physiological saline solution, 0.9% NaCl).
The coated material can be dried after the washing step at room temperature overnight or at 30°C for about 4 hour. Depending on the material, it can be put on filter paper and carefully turned from time to time.
The coated and dried material can be stored in foil bags with desiccant at +2 to +8°C.

Usually Polystreptavidin-coated surfaces itself are well blocked. Any additional block and / or stabilization steps have to be tested out.
Blocking can also be achieved by addition of blocking substances into the assay buffer during the following application.

Special coating instructions for lateral flow membranes:

Polystreptavidin R is first diluted with a neutral buffer solution. The recommended coating concentration is 10 - 200 µg/mL. The optimal concentration has to be tested out in the special application. Start the optimization at a concentration of 50 -100 µg/mL.

Performing variants:

I. Put lines or spots on the membrane and let dry it gently at room temperature overnight or at 30°C for about 4 hours.
II. The coating of large areas can be carried out by dipping. The dipping process should be carried out overnight (about 18 hours) at room temperature under mild agitation.
After the coating, the Polystreptavidin R solution should be aspirated and the material is thoroughly washed with distilled water or sodium chloride solution (physiological saline solution, 0.9% NaCl).
The membrane can be dried now at room temperature overnight or at 30°C for about 4 hours.

The coated and dried membranes can be stored in foil bags with desiccant at +2 to +8°C. The dried membranes are ready for use.

Blocking may not be required. It is to be tested. Blocking effects on membranes can also be achieved by addition of blocking substances into the assay buffer during the following application.

Complementary products:

For coating of very inert surfaces such as ceramic or certain plastics (Polypropylene, Polyethylene, Polycarbonate etc.), it is advisable to carry out a pre-coating with the BioTeZ PreCoating Solution 1. This is also available as a concentrate (PSC1).
It can also be used for absorptive surfaces in order to improve the coating with Polystreptavidin R.

Polystreptavidin R and PSC1 including all buffer solutions are also available as a finished kit (BioTeZ Polystreptavidin R Coating Kit; For 125, 500 or 1000 mL coating solution)

Molecular Mass:	**> 2,000,000 Da**
Biotin Binding Capacity, 50% Intercept:	**ca.350 pmol/mL** (The result comes from wells of a high binding polystyrene microplate, coated with Polystrept R in a concentration of 20µg/mL, using a competitive Biotin binding assay in 200µL/well.)
Form:	**Turbid Solution in 0.05M PBS with 0.05% NaN_3, pH=7.4** (Filtration not recommended, High Molecular Mass)
Storage:	**2 to 8 °C**
Application:	**For surface coating of plastics, membranes, beads etc. with *Maximum Biotin Binding Capacity***
Handling:	**Polystrept R is a coating solution concentrate, dilutable with PBS**
Usage Statement:	Laboratory reagent for research use only.