

User Manual

BioTides Peptides

ELISA plate coating with synthetic peptides prepared by SPOT synthesis

Table of Contents

1. Introduction	1
1.1. Introduction and Experimental Basics	1
2. BioTides Biotinylated Peptides	2
1.2. List of Components.....	2
1.3. Storage and Handling	2
1.4. Additional Materials Required	2
3. Coating Protocol	3
1.5. Dissolve Biotinylated Peptides	3
1.6. Dilution	3
1.7. Prewash	3
1.8. Immobilization.....	3
1.9. Washing	3
1.10 Blocking	3
1.11 Drying and Packaging	3
4. Contact Us	4
5. Product Use & Liability	4



Please read the entire manual before starting your experiments!
Carefully note the handling and storage conditions.
For research use only.

1. Introduction

1.1 Introduction and Experimental Basics

BioTides biotinylated peptides are designed for biomedical assays that require immobilization onto streptavidin coated beads, membranes, glass slides or microtiter plates (e.g. Peptide ELISA). BioTides are synthesized by JPT's proprietary SPOT synthesis technology providing fast access to large numbers of biotinylated peptides at unmatched pricing.

Properties of BioTides Biotinylated Peptides:

- Each peptide is biotinylated at the N-terminus
- A flexible hydrophilic linker between biotin and peptide is inserted
- The specialized synthesis method results in automatic removal of truncation sequences during immobilization
- Incorporation of non-natural amino acids or post-translational modifications like methylation or phosphorylation possible

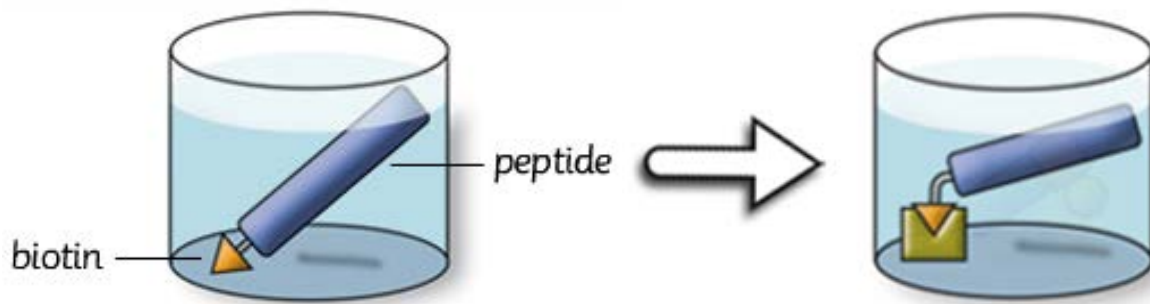


Fig.1: N-terminally biotinylated Peptide immobilized onto micro titer plates.

BioTides, immobilized on streptavidin coated microtiter plates can be used to perform Peptide ELISA (Enzyme-linked immunosorbent assay), an efficient tool for mapping the immune response at a single epitope resolution.

2. BioTides Biotinylated Peptides

1.2 List of Components

Component	Quantity
BioTides Biotinylated Peptides	according to order
Datasheet including plate layout and sequence information	One datasheet per batch
Leaflet including relevant information for storage and handling	One datasheet per batch

1.3 Storage and Handling

- Optimal storage conditions for undissolved peptides are in a cool (approx. 4°C / 39°F), dark and dry environment.
- Dissolved peptides should be stored at -80°C but might be subject to degradation.

1.4 Additional Materials Required

Additional Reagents

- Dimethylsulfoxid (DMSO)
- 10x Phosphat buffered saline (800g NaCl, 20g KCL, 144 g Na₂HPO₄ · 2H₂O, 24 g KH₂PO₄, 8L of distilled water)
- Peptide coating buffer: JPT recommends filtered 1x Phosphat buffered saline with 40 % DMSO and 0.05 % Tween)
- Wash-buffer: JPT recommends filtered 1x Phosphat buffered saline with 0.05 % Tween 20 (JPT commonly uses Tween 20 from Sigma Aldrich - P7949)
- Blocking-buffer: JPT recommends filtered 1x Phosphat buffered saline with 400 µM Biotin and 20 % Sucrose (JPT commonly uses Biotin from AppliChem – A0969 and Sucrose from Sigma Aldrich - 84097)

Additional Hardware

- Streptavidin coated Microtiter Plates: JPT recommends streptavidin coated plates from Thermo Fisher – 436014
- 96-Well Deep Well Plate
- Microplate shaker: JPT recommends the usage of a temperature controlled microplate shaker.
- Microplate washer: For efficient and repeatable washing, JPT recommends the usage of a microplate washer.

3. Coating Protocol



The following procedure is provided as a guideline only. The optimal experimental conditions will vary depending on the streptavidin-coated microtiter plates and instruments used. Therefore, they cannot be predetermined. It is the responsibility of the user to establish the optimal experimental conditions. We give no warranty or guarantee of performance by using this procedure.

The following coating procedure has been developed exclusively for streptavidin-coated microtiter plates.

1.5 Dissolve Biotinylated Peptides

Remove the protective silicon seal from the delivered plate and add 100 μ l DMSO to each peptide containing well. The plate layout and sequence information are delivered together with this protocol. Shake the plate until each peptide is fully dissolved, resulting in peptide stock-solutions (1).

1.6 Dilution

Prepare a 250 fold dilution of each peptide stock-solution in a separate 96-Well Deepwell plate (1) using peptide coating buffer (see section 4.1), resulting in peptide-solution (2).

1.7 Prewash

Depending on the streptavidin coated plates used, it is recommended to perform a prewash step of the full microtiter plate with wash-buffer (see section 4.1). Further information should be provided by the microtiter plate supplier.

1.8 Immobilization

Add 100 μ l of each peptide-solution (2) to a streptavidin-coated microtiter plate well according to your preferred assay-plate layout. Incubate the plate for 1 hour at room temperature without shaking.

1.9 Washing

Wash the plate 4 times with 300 μ l wash-buffer per well and empty the plate after the last wash.

1.10 Blocking

Add 200 μ l blocking buffer (see section 4.1) to each peptide coated well and incubate the plate for 30 min at room temperature without shaking. Afterwards, remove the blocking solution, but do not wash the wells.

1.11 Drying and Packaging

Dry the microtiter plates upside down on a paper towel at room temperature. If the plates are not used immediately it is recommended to store them at 4°C after packaging in aluminium bags together with a dry sac.

4. Contact Us

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5. Product Use & Liability

THE PRODUCTS ARE FOR EXPERIMENTAL LABORATORY USE ONLY AND NOT INTENDED FOR HUMAN OR HOUSEHOLD USE.

Only qualified personnel should handle these chemicals.

Note that missing hazard warnings do not indicate that a product is harmless. Products are for research use only (RUO). JPT Peptide Technologies declines responsibility for any damage arising from the inappropriate use of its products.

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