

TETANUS TOXOID COATED SURFACE

The Biomat product is a 96 well coated microplate with Tetanus Toxoid and a protein to block non-specific binding sites and to maintain stable activity.

Tetanus, commonly called lockjaw, is a serious bacterial disease that affects muscles and nerves. It is characterized by muscle stiffness that usually involves the jaw and neck that then progresses to involve other parts of the body.

This disease is caused by neurotoxin from deep wound infection with *Clostridium tetani*.

The use of this product can find application to set up assays where the level of anti-tetanus toxoid antibodies present in biological samples are measured spectrophotometrically, e.g. ELISA tests.

Example of applications:

- assessing efficacy of vaccines
- quantifying and standardizing vaccines batches and protocols

Product specifications

Available configurations

96-well microplates with 12 removable 8-well strips.

Coating

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

Binding capacity

Microplate was saturated with mouse IgG anti Tetanus Toxoid at a concentration of 0.125 µg/ml (12.5 ng/well) in an ELISA format using goat anti mouse IgG-HRP as detector and TMB as substrate (see Technical notes 42 and Figure 1 and 2 for data and experiment details).

The Biomat Tetanus Toxoid microplate shows a nominal **binding capacity of ~ 0.125 µg/ml of mouse IgG anti Tetanus Toxoid**.

Uniformity

Microplates show a **CV% less than 5** when used as a sandwich of mouse IgG anti Tetanus Toxoid in an ELISA format using goat anti mouse IgG -HRP as detector and TMB as substrate.

Storage and Stability

The microplates, under the indicated storage conditions 2-8 °C, are stable until the expiration date printed on the label.

If opened, store in closed pouch with desiccant and use within the expiration date.

TECHNICAL NOTES N. 42

Binding capacity test

1. Add 100 µl of different concentrations of monoclonal mouse IgG anti Tetanus Toxin (*NovusBio* code NBP1-05447 at 10.7 mg/ml), from 0.0005 to 0.500 µg/ml, diluted in Sample Diluent, (*Biomat* code 400-1-100) to the wells of Tetanus Toxoid coated plate and incubate for 60 minutes at room temperature
2. Empty the wells and wash with Wash Buffer, (*Biomat* code 200-1-100) four times
3. Add 100 µl/well of goat anti-mouse IgG -HRP (*Jackson ImmunoResearch* code 115-035-003), diluted 1:25,000 in Diluent for HRP conjugate, (*Biomat* code 400-2-100) and incubate for 60 minutes at room temperature
4. Empty the wells and wash with Wash Buffer, (*Biomat* code 200-1-100) four times
5. Add 100 µl/well of TMB substrate solution, (*Biomat* code 500-1-100) and incubate 15 minutes at room temperature
6. Stop the substrate reaction by adding 100 µl/well of sulphuric acid, (*Biomat* code 600-1-100) and read the optical density values at 450 nm

The data show that a plateau has got starting with a mouse IgG anti Tetanus Toxoid concentration of 0.125 µg/ml.

This concentration means the well binding capacity we can express as:

- µg/well = 0.0125 (12.5 ng/well)

Figure 1

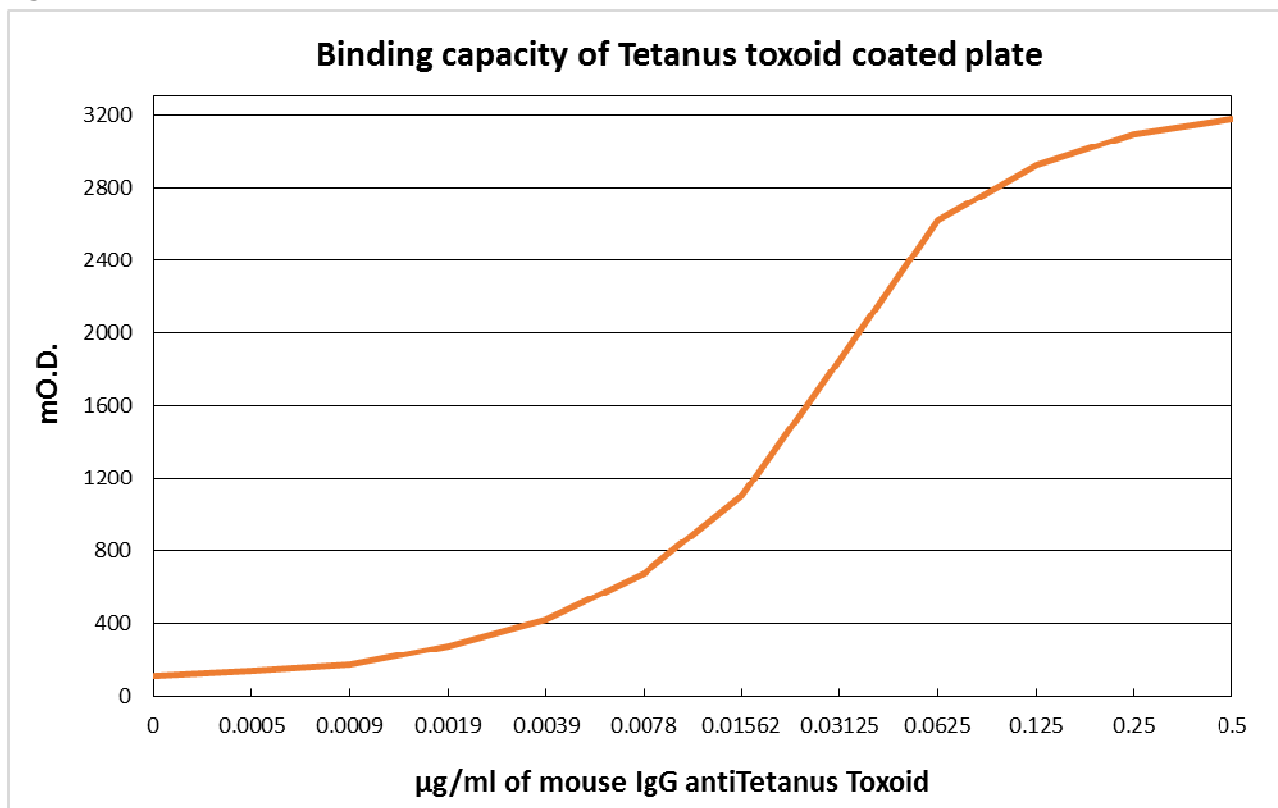


Figure 2: the figure gives an idea of the dilution factor to apply to the serum/plasma of the immunized mouse under evaluation; where k means a dilution of 1:1,000

