LUMINX
LuminX Biotech Co., Ltd

VANDIA™

Product Information

Content:

VANDIA™ contains 5 mL of **Reagent 1**, 0.6 mL of **Reagent 2**, 2.5 mL of **Reagent 3** and 5 mL of **Reagent 4**.

Storage and stability:

VANDO ™ should be stored at 4°C and is stable for at least 2 years when properly stored. Please DO NOT FREEZE.

Caution:

VANDIA ™ is only for research purpose and not for use in humans.

Description

VANDIA ™ is an oil-in-water nano-emulsion with nanoparticles in suspension. Recently, negatively charged nanoparticle has been documented to absorb antigens on its surface and is expected to improve the uptake of antigen by antigen presenting cells (APCs).[1] Typical results obtained with VANDIA™ are shown in **Figure 1**. Compared to many commercially available adjuvants (e.g., Alum), VANDIA™ only needs smaller amount (25 ug/shot → 5 ug/shot) of antigen to get stronger antibody response (>3X) *in vivo*.

VANDO ™ has three main advantages over existing products:

1. High antibody production yield (>3X).
2. Low demand in antigen dosage.
3. Low side effect.

Methods

Preparation of VANDIA ™-antigens emulsion:

The amount of antigen used for the immunization can be adjusted depending upon availability and immunogenicity of the antigen. As shown in **Figure 1**, mice were immunized with ~5 to 25 ug/mL of endotoxin-free ovalbumin (antigen) through subcutaneous (s.c.) injection.

1. Dilute the desired antigen with **Reagent 1**.
2. Mix 1 uL of the desired antigen (from Step 1) and 6 uL of **Reagent 2** through repeated pipetting and incubate the **Reagent 2**-antigen mixture for 5 min.
3. Mix **Reagent 2**-antigen mixture with 93 uL of **Reagent 3** (for 1st immunization) or **Reagent 4** (for 2ed and further immunization) through quick and repeated pipetting to form a white emulsion (totally 100 uL, VANDIA™-antigen). Please note that a homogeneous emulsion is a key to produce high titers of antibodies.
4. Vaccinate animals with VANDIA™-antigen from Step 3 through s.c. injection.

Reference

1. Pham, N.B., et al., Nanodiamond enhances immune responses in mice against recombinant HA/H7N9 protein. Journal of Nanobiotechnology, 2017. 15.

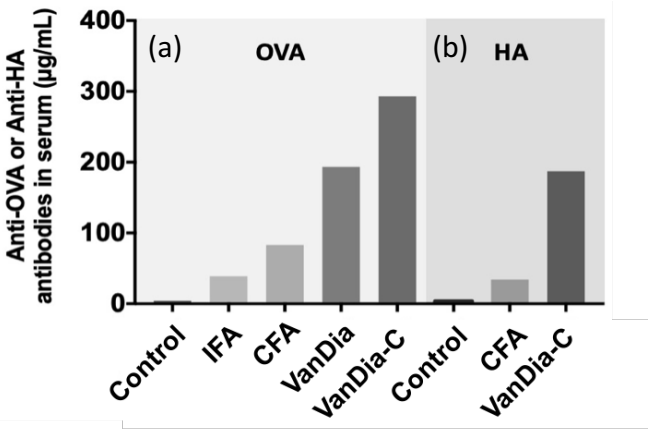

Fig 1. Enhancement of antibody production with IFA, CFA, VANDIA™, and VANDIA-C™ in mice. The animals were immunized with 5 μg of ovalbumin (OVA) (a) and hemagglutinin (HA) (b) in the individual treatments.

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