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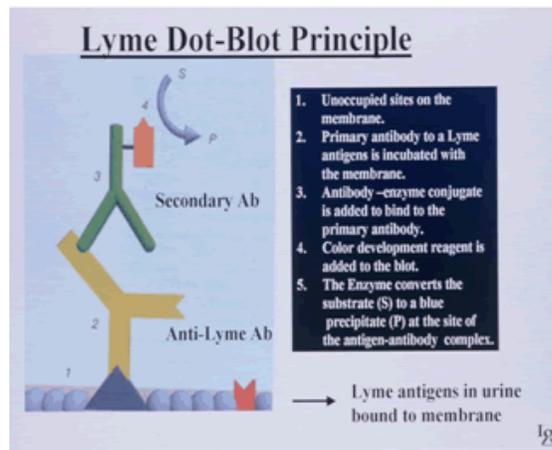
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## ANTIGEN DETECTION

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### Lyme DOT-BLOT Assay for Antigen (LDA)

The LDA is an immunoassay for the direct detection of Lyme antigen in urine that reacts specifically to rabbit anti-*B. burgdorferi* antibodies. The rabbit antibodies are specifically targeted to the following *B. burgdorferi* antigens: 23kDa - 25kDa (Osp C), 31 kDa (Osp A), 34 kDa (Osp B), 39kDa and/or 93kDa. If the *B. burgdorferi* specific antigen(s) are present in the urine sample, a dot with a bluish-purple precipitate forms on the membrane.



The limit of detection in urine spiked with sonicated *B. burgdorferi* is 12.5ng/ml of urine. In an in-house study performed on "general population" (age group 3yrs to 70yrs) with no symptoms of Lyme, the assay specificity was greater than 96%.

Urine is collected in Becton Dickinson's (BD) Vacutainer Brand Urine Collection Kit (4962) and then sent to IGeneX. The antigens present in the processed urine are immobilized onto a membrane in a DOT-BLOT format. The membrane is then incubated with anti-*B. burgdorferi* specific antibodies. After washing the unbound antibodies, the bound anti-*B. burgdorferi* specific antibodies are reacted with horseradish peroxidase (HRP) conjugated anti-rabbit IgG. The membrane is washed to remove unbound conjugated antibody. Finally, the membrane is reacted with a precipitating color developing solution, which deposits a bluish-purple precipitate on dots that have antigens reacting to anti-*B. burgdorferi* specific antibodies: 23-25kDa (OspC), 31kDa (OspA), 34kDa (OspB), 39kDa and/or 93kDa

### Interpretation of the LDA

A positive result indicates that the urine reacted against rabbit anti-*B. burgdorferi* antibodies with specificity to any one or more of the following *B. burgdorferi* antigens: 23-25kDa (OspC), 31kDa (OspA), 34kDa (OspB), 39kDa and/or 93kDa. Any positive sample is considered presumptive positive until confirmed by another method – we recommend the Urine Multiplex PCR. A negative result indicates that the Lyme antigen was below the detection limit of 12.5 ng/ml or the Lyme antigen was absent from the sample.

#### Test Description

Lyme DOT BLOT Assay (LDA)

#### Test #

- 800 Single LDA Sample
- 802 LDA Panel (2 samples)
- 805 LDA Panel (3 samples)

#### Specimen

8-10 ml urine

**Collection & Shipping**

Collect in Becton Dickinson 4962 Gray Top Tubes - FOR URINE ONLY.  
Refrigerate - then ship at room temperature.

**CPT Code**

87449

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