**Introduction:**

Adrenal antibodies are associated with the idiopathic form of Addison's Disease, and are more common in males than females. Early detection of auto-antibodies in patient with sub-clinical Adrenal deficiency who develope an adrenal crisis during infection or appendicitis, can be life saving. Cases have been noted where young patients with unsuspected Addison's disease have died before a diagnosis had been reached. Many patients with adrenal antibodies also have an overlap of additional diseases such as thyroid disease, insulin-dependent diabetes, and secondary amenorrhoea. Screening for adrenal antibodies in these circumstances could be very beneficial as very low incidence of adrenal antibody are found in normals.

**Materials Provided:**

Storage & Stability of Components:

1. FITC Conjugate No. 1502L (3.0 ml) with Evans Blue Counterstain is to be stored at 2-8˚C upon receipt. The conjugate is stable at this temperature until expiration date on the vial label.
2. The antigen slides of monkey adrenal sections must be stored at 2-8˚C or lower upon receipt. Check label for specific expiration date.
3. Anti-Adrenal Positive Control No. 6402S (0.5 ml lyophilized) The control contains 0.095% sodium azide as a preservative. In the lyophilized state, the control sera should be stored at 2-8˚C. Refer to the product label for expiration date. Once reconstituted with 0.5 ml distilled water, small aliquots may be stored for 6 months at -20˚C or lower or they may be stored at 2-8˚C for up to 14 days.
4. Universal negative control No. 1000L (1.0 ml) should be stored at 2-8˚C upon receipt. Check label for specific expiration date.
5. Buffer Pack No. 1601 - Phosphate Buffered Saline is stable at room temperature storage to the date indicated on the label. The reconstituted Buffer does not contain preservatives and should be stored at 2-8˚C. Care should be taken to avoid contamination.
6. Mounting Medium No. 1610 is stable when stored at 2-8˚C. Check label for specific expiration date.

Note: All kit components are available separately. Please see the current SCIMEDX Corporation Catalog for more details.

**Additional Materials Required but not Provided:**

Test tubes and rack or microtiter system
Disposable pipettes
Staining Dish and Slide Forceps
Moisture Chamber
Volumetric Flask (500 ml)
Distilled $H_20$
Fluorescence Microscope
Paper Towels - lint free

**Reagent Preparation:**

1. Buffer Pack No. 1601. Rehydrate buffer with 1 liter of sterile distilled water.

**Specimen Collection:**

Serological specimens should be collected under aseptic conditions. Hemolysis is avoided through prompt separation of the serum from the clot. Serum should be stored at 2-8˚C if it is to be analyzed within a few days. Serum may be held for 3 to 6 months by storage at -20˚C or lower. Lipemic and strongly hemolytic serum should be avoided. When specimens are shipped at ambient temperatures, addition of a preservative such as 0.095% sodium azide is strongly recommended.

**Test Instruction:**

**Screening:** dilute test serums 1:4 in PBS. **Titration:** set up doubling dilutions of serum starting at 1:4, 1:8 1:16, 1:32, etc.)

1. Once slides reach room temperature tear slide envelope at notch. Carefully remove the slide and avoid touching the antigen areas. The slide is now ready to use.
2. Place a drop of diluted serum (20 to 30 µl) and controls over the antigen wells.
3. Place slide with patient's serum and controls in a moist chamber for 30 minutes at room temperature (approximately 24˚C).
4. Remove slide from moisture chamber and tap the slide on its side to allow the serum to run off onto a piece of paper towel. Using a wash bottle, gently rinse remaining sera from slide being careful not to aim the rinse stream directly on to the well.
5. Wash in PBS for five minutes. Repeat using fresh PBS.
6. Place a blotter on the lab table with absorbent side up. Remove slide from PBS and invert so that tissue side faces absorbent side of blotter. Line up wells to blotter holes. Place slide on top of blotter. **Do not allow tissue to dry.** Wipe back of slide with dry lint free paper towel. Apply sufficient pressure to slide while wiping to absorb buffer.
7. Deliver 1 drop (25-30 µl) of conjugate per antigen well. Repeat steps 3-6.
8. Place 4-5 drops of mounting medium on slide.
9. Apply a 22 x 70 mm coverslip. Examine the slide under a fluorescent microscope. Note: To maintain fluorescence, store mounted slide in a moisture chamber placed in a dark refrigerator.

**Results:**

A positive results is observed as a bright 3-4+ staining. This antibody is associated with Addison's disease and may be significant in the patient profile, as well as aid in the diagnosis and prognosis.

**Quality Control:**

1. Positive and negative serum controls must be included in each day's testing to confirm reproducibility, sensitivity and specificity of the test procedure.
2. The negative serum control should result in little (+) or no fluorescence. If this control shows bright fluorescence, either the control, antigen, conjugate or technique may be at fault.
3. The positive serum control should result in bright 3+ to 4+ fluorescence. If this control shows little or no fluorescence, either the control, antigen, conjugate or technique may be at fault.
4. In addition to positive and negative serum controls, a PBS control should be run to establish that the conjugate is free from nonspecific staining of the antigen substrate. If the antigen shows bright fluorescence in the PBS control repeat using fresh conjugate. If the antigen still fluoresces, either the conjugate or antigen may be at fault.

**Precautions:**

1. All human components have been tested by for (HBsAg) and HTLVIII/LAV by an FDA approved method and found to be negative. (Not repeatedly reactive). However, this does not assure the absence of HBsAg or HTLVIII/LAV. All human components should be handled with appropriate care.
2. The sodium azide (0.095%) included in the controls and conjugate is toxic if ingested.
3. Do not use components beyond their expiration date.
4. Follow the procedural instructions exactly as they appear in this insert to insure valid results.
5. For In Vitro Diagnostic Use.
6. Handle slides by the edges since direct pressure on the antigen wells may damage the antigen.
7. Once the procedure has started do not allow the antigen in the wells to dry out. This may result in false negative test results, or unnecessary artifacts.

**Bibliography:**


1. Doniach, D., Bottazzo, G.: Autoimmune Endocrine Disorders, Hsop Update 9(10): 6, 1983.
2. Doniagh, D., Bottazzo, G.: Polyendocrine autoimmunity, In: Franklin, E., ed. Clinical Immunology Update, Holland Elsevier, p. 95-121, 1981.

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# ANTIBODY TEST SYSTEM

## For In Vitro Diagnostic Use

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