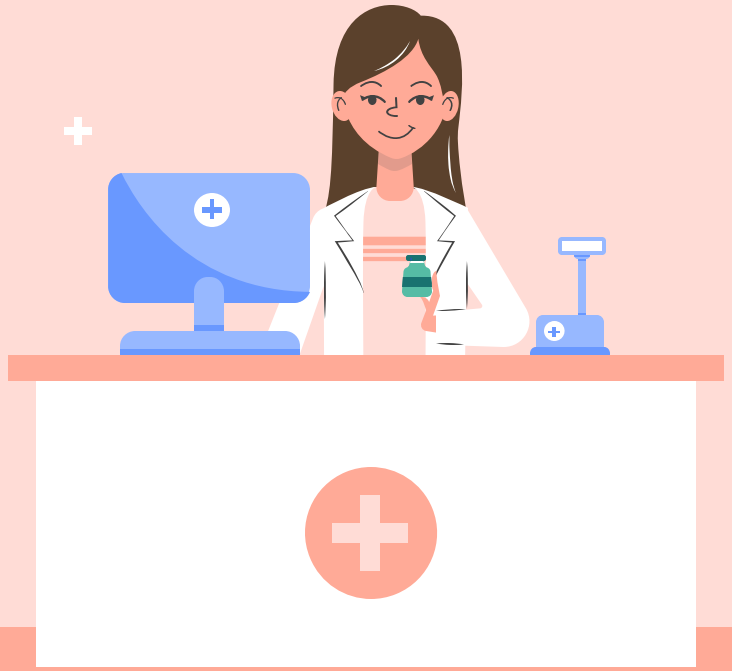


كلية المستقبل الجامعة / قسم المختبرات الطبية
المرحلة الثالثة / مادة التقنيات المختبرية

Anti Nuclear Antibody

Introduction

Intended Use

The ANA Screen ELISA test system is an enzyme-linked immunosorbent assay (ELISA) for the detection of IgG class antibodies to ANA in human serum or plasma.

Background

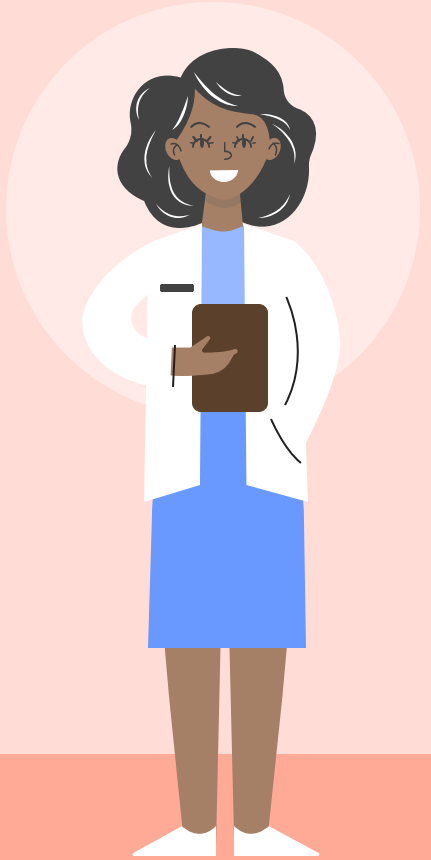
Antinuclear antibodies (ANA) are frequently present in patients with systemic lupus erythematosus (SLE) and, less commonly, in other autoimmune diseases Rheumatoid arthritis, Collagen vascular diseases, chronic liver diseases and systemic sclerosis (sclerodermaautoimmune diseases.

Principle of the Assay

Diluted human serum is added to wells coated with purified nuclear antigens. ANA IgG specific antibody, if present, binds to the antigen. All unbound materials are washed away and the enzyme conjugate is added to bind to the antibody-antigen complex, if present. Excess enzyme conjugate is washed off and substrate is added. The plate is incubated to allow the hydrolysis of the substrate by the enzyme. The intensity of the color generated is proportional to the amount of IgG specific antibody in the sample.

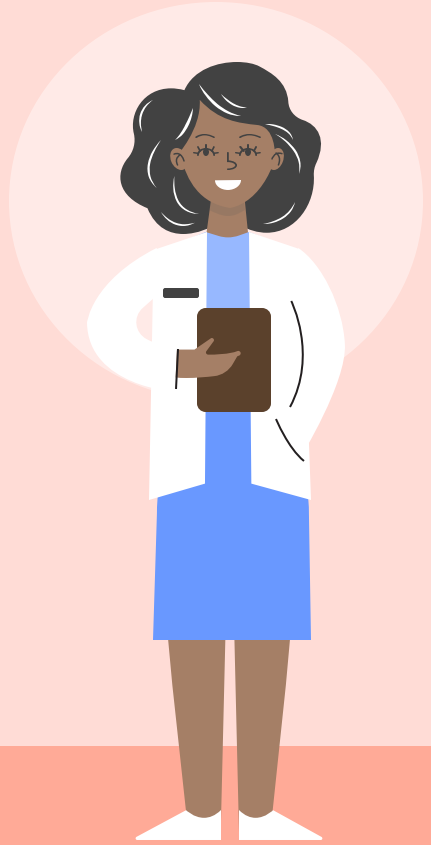
Materials Supplied

Component	Amount
Microwells coated with nuclear antigens	96 (8x12) wells
Sample Diluent (ready to use)	22 mL
Calibrator (ready to use)	1 mL
Positive Control (ready to use)	1 mL
Negative Control (ready to use)	1 mL
Enzyme conjugate (ready to use)	12 mL
TMB Substrate (ready to use)	12 mL
Stop Solution (ready to use)	12 mL
Wash concentrate 20X	25 mL



Materials Required but Not Supplied

- Distilled or deionized water.
- Precision pipettes.
- Disposable pipette tips.
- ELISA reader capable of reading absorbance at 450 nm.
- Absorbance paper or paper towel.



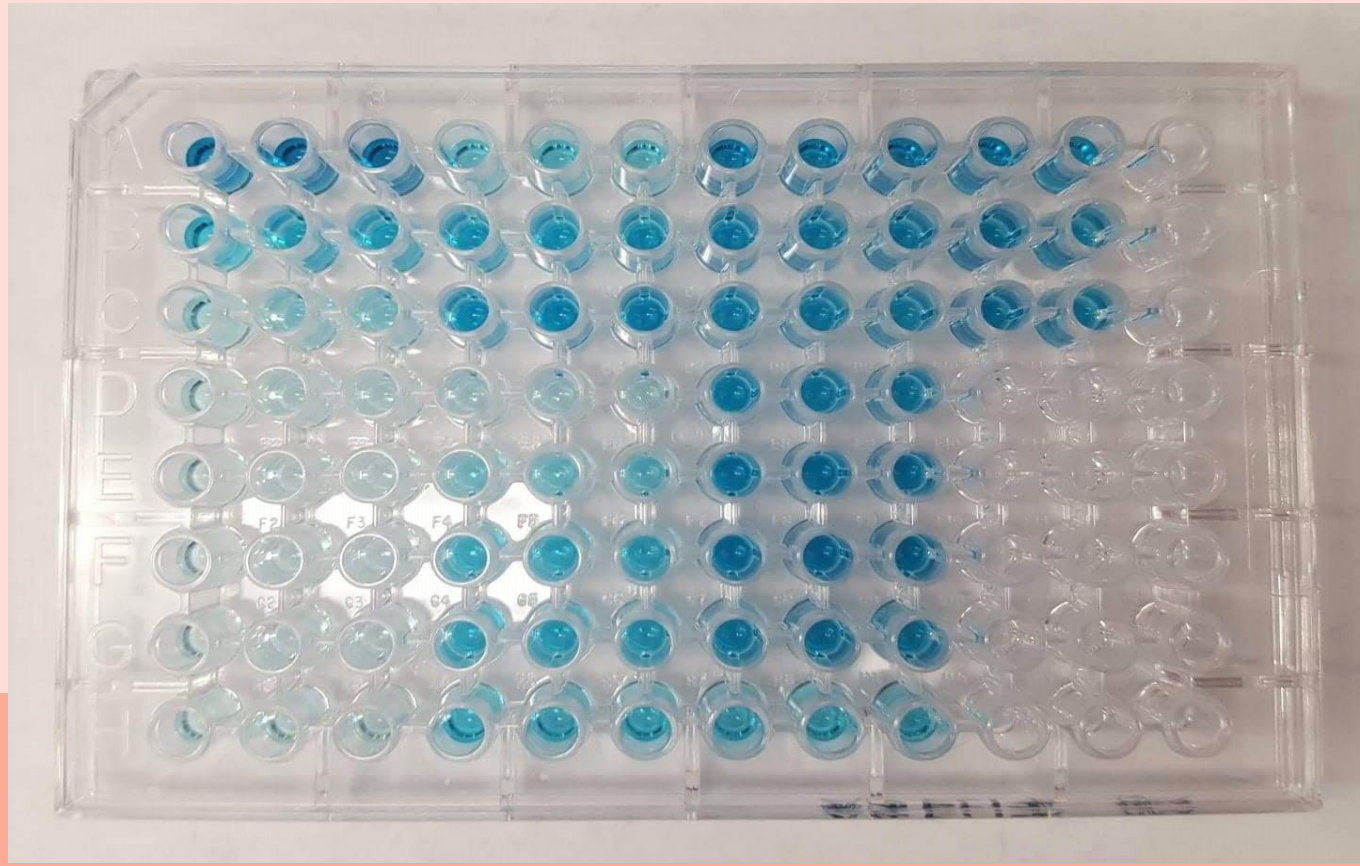
Reagent Preparation

Prepare 1X Wash buffer by adding the contents of the bottle (25 mL, 20X) to 475 mL of distilled or deionized water. Store at room temperature (20-25°C).

Sample Preparation

1-Collect blood specimens and separate the serum.

2-Specimens may be refrigerated at 2–8°C for up to seven days or frozen for up to six months. Avoid repetitive freezing and thawing



Assay Procedure

-Bring all specimens and kit reagents to room temperature (20-25 °C) and gently mix.
-Place the desired number of coated strips into the holder.
-Negative control, positive control, and calibrator are ready to use. Prepare 1:21 dilution of test samples, by adding 10 µL of the sample to 200 µL of sample diluent. Mix well.
-Dispense 100 µL of diluted sera, calibrator and controls into the appropriate wells. For the reagent blank, dispense 100 µL sample diluent in 1A well position. Tap the holder to remove air bubbles from the liquid and mix well. Incubate for 20 minutes at room temperature.
-Remove liquid from all wells. Wash wells three times with 300 µL of 1X wash buffer. Blot on absorbance paper or paper towel.
-Dispense 100 µL of enzyme conjugate to each well and incubate for 20 minutes at room temperature.
Remove enzyme conjugate from all wells. Wash wells three times with 300 µL of 1X wash buffer. Blot on absorbance paper or paper towel
-Dispense 100 µL of TMB substrate and incubate for 10 minutes at room temperature.
-Add 100 µL of stop solution.
-Read O.D. at 450 nm using ELISA reader within 15 min. A dual wavelength is recommended with reference filter of 600-650 nm.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Calculation of Results

1-Check Calibrator Factor (CF) value on the calibrator bottle. This value might vary from lot to lot. Make sure you check the value on every kit.

2-Calculate the cut-off value: Calibrator OD x Calibrator Factor (CF).

3-Calculate the Ab (Antibody) Index of each determination by dividing the O.D. value of each sample by cut-off value.

PATIENT SATISFACTION

Example

Example of typical results Calibrator mean OD = 0.8 Calibrator Factor (CF) = 0.5
Cut-off Value = 0.8 x 0.5= 0.400 Positive control O.D. = 1.2
Ab Index = 1.2 / 0.4 = 3 Sample O.D. = 1.6
Ab Index = 1.6 / 0.4 = 4.0

THANKS