



Procedure	Result	Units	Ref Interval	Accession	Collected	Received	Reported/Verified
Anti-Nuclear Ab (ANA), IgG by ELISA	Detected *f		[None Detected]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:10:03
Double-Stranded DNA (dsDNA) Ab IgG ELISA	Detected *		[None Detected]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
Double-Stranded DNA (dsDNA) Ab IgG IFA	1:10 *		[<1:10]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:12:05
Smith (ENA) Antibody, IgG	0	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
SSA-52 (Ro52) (ENA) Antibody, IgG	5	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
SSA-60 (Ro60) (ENA) Antibody, IgG	1	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
Smith/RNP (ENA) Ab, IgG	10	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG	0	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
SSB (La) (ENA) Antibody, IgG	2	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
Scleroderma (Scl-70) (ENA) Antibody, IgG	2	AU/mL	[0-40]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:11:50
Antinuclear Antibody (ANA), HEp-2, IgG	Detected *		[<1:80]	19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:10:45
ANA Pattern	Homogeneous *			19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:10:49
ANA Titer	1:320 *f			19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:10:50
ANA Interpretive Comment	See Note			19-161-900080	10-Jun-19 11:04:00	10-Jun-19 11:04:00	10-Jun-19 11:10:45

10-Jun-19 11:04:00 ANA Interpretive Comment
 Homogeneous Pattern
 Clinical associations: SLE, drug-induced SLE or JIA.
 Main autoantibodies: Anti-dsDNA, anti-histones or anti-chromatin (anti-nucleosome)

Clinical Relevance
 Antisynthetase syndrome (ARS), chronic active hepatitis (CAH), inflammatory myopathies (IM) [dermatomyositis (DM), polymyositis (PM), necrotizing autoimmune myopathy (NAM)], interstitial lung disease (ILD), juvenile idiopathic arthritis (JIA), mixed connective tissue disease (MCTD), primary biliary cholangitis (PBC), rheumatoid arthritis (RA), systemic autoimmune rheumatic diseases (SARD), Sjogren syndrome (SjS), systemic lupus erythematosus (SLE), systemic sclerosis (SSc), undifferentiated connective tissue disease (UCTD).

10-Jun-19 11:04:00 Anti-Nuclear Ab (ANA), IgG by ELISA:
 Antibodies to Anti-Nuclear Antibodies (ANA) detected. Additional testing to follow.

10-Jun-19 11:04:00 ANA Titer:
 Extractable Nuclear Antigen Antibodies (RNP, Smith, SSA 52, SSA 60, Scleroderma, Jo-1, and SSB), and Double Stranded DNA (dsDNA) Antibody IgG to follow.

10-Jun-19 11:04:00 Anti-Nuclear Ab (ANA), IgG by ELISA:
 INTERPRETIVE INFORMATION: Anti-Nuclear Antibodies (ANA), IgG by ELISA

Antinuclear Antibodies (ANA), IgG by ELISA: ANA specimens are screened using enzyme-linked immunosorbent assay (ELISA) methodology. All ELISA results reported as Detected are further tested by indirect fluorescent assay (IFA) using HEp-2 substrate with an IgG-specific conjugate. The ANA ELISA screen is designed to detect antibodies against dsDNA, histones, SS-A (Ro), SS-B (La), Smith, Smith/RNP, Scl-70, Jo-1, centromeric proteins, other antigens extracted from the HEp-2 cell nucleus. ANA ELISA assays have been reported to have lower sensitivities than ANA IFA for systemic autoimmune rheumatic diseases (SARD).

Negative results do not necessarily rule out SARD.

* Abnormal, # = Corrected, C = Critical, f = Footnote, H = High, L = Low, t = Interpretive Text, @ = Reference Lab

10-Jun-19 11:04:00 Double-Stranded DNA (dsDNA) Ab IgG ELISA:
INTERPRETIVE INFORMATION: Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA

Positivity for anti-double stranded DNA (anti-dsDNA) IgG antibody is a diagnostic criterion of systemic lupus erythematosus (SLE). Specimens are initially screened by enzyme-linked immunosorbent assay (ELISA). All ELISA results reported as "detected" (positive) are confirmed by a highly specific IFA titer (*Crithidia luciliae* indirect fluorescent test [CLIFT]). Some patients with early or inactive SLE may be positive for anti-dsDNA IgG by ELISA but negative by CLIFT. If the patient is negative by CLIFT but positive by ELISA and clinical suspicion remains, consider antinuclear antibody (ANA) testing by IFA. Additional information and recommendations for testing may be found at <http://www.arupconsult.com/Topics/AutoimmuneDz/ConnectiveTissueDz/index.html>.

10-Jun-19 11:04:00 Double-Stranded DNA (dsDNA) Ab IgG IFA:
INTERPRETIVE INFORMATION: Double-Stranded DNA (dsDNA) Antibody, IgG by IFA (using *Crithidia luciliae*)

Positivity for anti-double stranded DNA (anti-dsDNA) IgG antibody is a diagnostic criterion of systemic lupus erythematosus (SLE). The presence of the anti-dsDNA IgG antibody is identified by IFA titer (*Crithidia luciliae* indirect fluorescent test [CLIFT]). CLIFT is highly specific for SLE with a sensitivity of 50-60 percent.

Some patients with early or inactive SLE may be positive for anti-dsDNA IgG by ELISA but negative by CLIFT. If the CLIFT result is negative but the patient has a positive ELISA and clinical suspicion remains, consider antinuclear antibody (ANA) testing by IFA. Additional information and recommendations for testing may be found at <http://www.arupconsult.com/Topics/AutoimmuneDz/ConnectiveTissueDz/index.html>.

10-Jun-19 11:04:00 Smith (ENA) Antibody, IgG:
INTERPRETIVE INFORMATION: Smith (ENA) Antibody, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

Smith antibody is highly specific (greater than 90 percent) for systemic lupus erythematosus (SLE) but only occurs in 30-35 percent of SLE cases. The presence of antibodies to Smith has variable associations with SLE clinical manifestations.

10-Jun-19 11:04:00 SSA-52 (Ro52) (ENA) Antibody, IgG:
INTERPRETIVE INFORMATION: SSA-52 (Ro52) (ENA) Antibody, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

SSA-52 (Ro52) and/or SSA-60 (Ro60) antibodies are associated with a diagnosis of Sjogren syndrome, systemic lupus erythematosus (SLE), and systemic sclerosis. SSA-52 antibody overlaps significantly with the major SSc-related antibodies. SSA-52 (Ro52) antibody occurs frequently in patients with inflammatory myopathies, often in the presence of interstitial lung disease.

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10-Jun-19 11:04:00 SSA-60 (Ro60) (ENA) Antibody, IgG:
REFERENCE INTERVAL: SSA-60 (Ro60) (ENA) Antibody, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

10-Jun-19 11:04:00 Smith/RNP (ENA) Ab, IgG:
INTERPRETIVE INFORMATION: Smith/RNP (ENA) Antibody, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

Smith/RNP antibodies are frequently seen in patients with mixed connective tissue disease (MCTD) and are also associated with other systemic autoimmune rheumatic diseases (SARDs) such as systemic lupus erythematosus (SLE), systemic sclerosis, and myositis. Antibodies targeting the Smith/RNP antigenic complex also recognize Smith antigens, therefore, the Smith antibody response must be considered when interpreting these results.

10-Jun-19 11:04:00 Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG:
INTERPRETIVE INFORMATION: Jo-1 Antibody, IgG

29 AU/mL or less.....Negative
30-40 AU/mL.....Equivocal
41 AU/mL or greater.....Positive

10-Jun-19 11:04:00 SSB (La) (ENA) Antibody, IgG:
INTERPRETIVE INFORMATION: SSB (La) (ENA) Ab, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

SSB (La) antibody is seen in 50-60% of Sjogren syndrome cases and is specific if it is the only ENA antibody present. 15-25% of patients with systemic lupus erythematosus (SLE) and 5-10% of patients with progressive systemic sclerosis (PSS) also have this antibody.

10-Jun-19 11:04:00 Scleroderma (Scl-70) (ENA) Antibody, IgG:
INTERPRETIVE INFORMATION: Scleroderma (Scl-70) (ENA) Ab, IgG

29 AU/mL or Less Negative
30 - 40 AU/mL Equivocal
41 AU/mL or Greater Positive

The presence of Scl-70 antibodies (also referred to as topoisomerase I, topo-I or ATA) is considered diagnostic for systemic sclerosis (SSc). Scl-70 antibodies alone are detected

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in about 20 percent of SSc patients and are associated with the diffuse form of the disease, which may include specific organ involvement and poor prognosis. Scl-70 antibodies have also been reported in a varying percentage of patients with systemic lupus erythematosus (SLE). Scl-70 (topo-1) is a DNA binding protein and anti-DNA/DNA complexes in the sera of SLE patients may bind to topo-I, leading to a false-positive result. The presence of Scl-70 antibody in sera may also be due to contamination of recombinant Scl-70 with DNA derived from cellular material used in immunoassays. Strong clinical correlation is recommended if both Scl-70 and dsDNA antibodies are detected.

Negative results do not necessarily rule out the presence of SSc. If clinical suspicion remains, consider further testing for centromere, RNA polymerase III and U3-RNP, PM/Scl, or Th/To antibodies.

10-Jun-19 11:04:00 ANA Interpretive Comment:
INTERPRETIVE INFORMATION: ANA Interpretive Comment

Presence of antinuclear antibodies (ANA) is a hallmark feature of systemic autoimmune rheumatic diseases (SARD). ANA lacks diagnostic specificity and is associated with a variety of diseases (cancers, autoimmune, infectious, and inflammatory conditions) and may also occur in healthy individuals in varying prevalence. The lack of diagnostic specificity requires confirmation of positive ANA by more-specific serologic tests. ANA (nuclear reactivity) positive patterns reported include centromere, homogeneous, nuclear dots, nucleolar, or speckled. Cytoplasmic pattern is reported as ANA negative. All patterns are reported to endpoint titers (1:2560). Reported patterns may help guide differential diagnosis, although they may not be specific for individual antibodies or diseases. Negative results do not necessarily rule out SARD.