

Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB: 12/31/1752
Gender: Unknown
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 01/01/2017 12:34

Autoimmune Liver Disease Reflexive Panel

ARUP test code 3002479

Soluble Liver Antigen Antibody, IgG

35.0 U H (Ref Interval: 0.0-24.9)

INTERPRETIVE INFORMATION: Soluble Liver Antigen Antibody, IgG

0.0 - 20.0 U Negative
20.1 - 24.9 U Equivocal
25.0 U or greater Positive

The presence of SLA antibodies has almost 100% specificity for autoimmune hepatitis, although only 12-30% have these antibodies. Thus, a negative SLA IgG test does not rule out autoimmune hepatitis.

F-Actin (Smooth Muscle) Ab, IgG by ELISA

100 Units H (Ref Interval: 0-19)

INTERPRETIVE INFORMATION: F-Actin (Smooth Muscle) Antibody, IgG by ELISA

19 Units or less Negative
20 - 30 Units Weak Positive-Suggest repeat testing in two to three weeks with fresh specimen.
31 Units or greater..... Positive-Suggestive of autoimmune hepatitis type 1 or chronic active hepatitis.

F-actin IgG antibodies have been shown to have increased sensitivity for autoimmune hepatitis (AIH) but lower specificity than smooth muscle antibodies (SMA). F-actin IgG antibodies can also be seen in SMA-negative disease controls (non-AIH), especially in patients with primary biliary cirrhosis and chronic hepatitis C infections. Some patients with AIH may be SMA-positive but negative for F-actin IgG. Consider testing for SMA by IFA if suspicion for AIH is strong.

Liver-Kid Microsome-1 Ab, IgG by ELISA

35.0 U H (Ref Interval: 0.0-24.9)

INTERPRETIVE INFORMATION: Liver-Kidney Microsome-1 Antibody, IgG by ELISA

0.0 - 20.0 U Negative
20.1 - 24.9 U Equivocal
25.0 U or Greater Positive

A positive result indicates the presence of IgG antibodies to recombinant human P450 2D6 and suggests the possibility of autoimmune hepatitis, type 2. A negative LKM-1 does not rule out the presence of autoimmune hepatitis, type 2.

H=High, L=Low, *=Abnormal, C=Critical

Unless otherwise indicated, testing performed at:

ARUP LABORATORIES | 800-522-2787 | aruplab.com
500 Chipeta Way, Salt Lake City, UT 84108-1221
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example
ARUP Accession: 20-182-117978
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
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Mitochondrial (M2) Antibody, IgG **30.0 Units H** **(Ref Interval: 0.0-20.0)**
 REFERENCE INTERVAL: Mitochondrial (M2) Antibody, IgG
 20.0 Units or less Negative
 20.1 - 24.9 Units..... Equivocal
 25.0 Units or greater..... Positive

Anti-mitochondrial antibodies (AMA) are thought to be present in 90-95% of patients with primary biliary cholangitis (PBC). However, the frequency of detected antibodies may be cohort or assay dependent, as lower sensitivities have been reported. Not all PBC patients are positive for AMA; some patients may be positive for SP100 and/or GP210 antibodies. A negative result does not rule out PBC.

Antinuclear Antibody (ANA), HEp-2, IgG **Detected** ***** **(Ref Interval: <1:80)**

ANA Interpretive Comment See Note

Centromere Pattern
 Clinical associations: SSc, PBC
 Main autoantibodies: Anti-centromere A/B(C)

Speckled Pattern
 Clinical associations: SLE, SSc, SjS, DM, PM, MCTD, UCTD. May also be found in healthy individuals
 Main autoantibodies: Anti-SSA-52 (Ro52), anti-SSA-60 (Ro60), anti-SS-B/LA, anti-Topo-1 (anti-Scl-70), Smith, anti-U1-RNP, anti-U2-RNP, anti-Mi-2, anti-TIF1g, anti-Ku, anti-RNA polymerase, anti-DFS70/LEDGF-P75

Cytoplasmic Pattern
 Clinical associations: ARS, ILD, IM, SLE, SSc, SjS, RA, MCTD, PBC, AIH, infectious, neurologic, and other inflammatory conditions. May also be found in healthy individuals
 Main autoantibodies: Anti-Ribosomal P, anti-tRNA synthetase (anti-Jo-1, anti-PL-7, anti-PL-12, anti-EJ, anti-OJ), anti-signal recognition particle (anti-SRP) or anti-mitochondria (anti-AMA)

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).

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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.

Smooth Muscle Antibody, IgG Titer

ARUP test code 0051244

Smooth Muscle Ab, IgG Titer

1:320 * (Ref Interval: <1:20)

INTERPRETIVE INFORMATION: Smooth Muscle Ab, IgG Titer

Less than 1:20 Negative - No antibody detected.
1:20 - 1:80 Weak Positive - Suggest repeat in two to three weeks with fresh specimen.
1:160 or greater Positive - Suggestive of autoimmune hepatitis or chronic active hepatitis.

Antinuclear Antibody (ANA) with HEP-2 Substrate, IgG by IFA, Dual Pattern (Reflex for 3000082 ANA IFA AB Only Not Orderable by Clients)

ARUP test code 3000084

ANA Pattern

Centromere *

ANA Titer

1:1280 *

ANA Pattern 2

Speckled *

ANA Titer 2

1:640 *

Antinuclear Antibody (ANA) with HEP-2 Substrate, IgG by IFA, Cytoplasmic Pattern (Reflex for 3000082 ANA IFA AB Only Not Orderable by Clients)

ARUP test code 3000478

Cytoplasmic Titer

1:160 *

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VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Soluble Liver Antigen Antibody, IgG	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM
F-Actin (Smooth Muscle) Ab, IgG by ELISA	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM
Liver-Kid Microsome-1 Ab, IgG by ELISA	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM
Mitochondrial (M2) Antibody, IgG	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM
Smooth Muscle Ab, IgG Titer	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:47 PM	6/30/2020 2:38:00 PM
Antinuclear Antibody (ANA), HEp-2, IgG	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM
ANA Pattern	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:46 PM	6/30/2020 2:38:00 PM
ANA Titer	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:46 PM	6/30/2020 2:38:00 PM
ANA Pattern 2	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:46 PM	6/30/2020 2:38:00 PM
ANA Titer 2	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:46 PM	6/30/2020 2:38:00 PM
Cytoplasmic Titer	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:37:47 PM	6/30/2020 2:38:00 PM
ANA Interpretive Comment	20-182-117978	6/30/2020 2:36:00 PM	6/30/2020 2:36:36 PM	6/30/2020 2:38:00 PM

END OF CHART

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