

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

Physician: Doctor, Example

Patient: Patient, Example

DOB: 8/9/1971
Gender: Female
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 00/00/0000 00:00

Autoimmune Liver Disease Reflexive Panel

ARUP test code 3002479

Soluble Liver Antigen Antibody, IgG

128.9 U H (Ref Interval: 0.0-24.9)

REFERENCE INTERVAL: 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

50 Units H (Ref Interval: 0-19)

REFERENCE INTERVAL: 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

1.0 U (Ref Interval: 0.0-24.9)

REFERENCE INTERVAL: 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

Mitochondrial (M2) Antibody, IgG

66.7 Units H (Ref Interval: 0.0-24.9)

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

Homogeneous Pattern
Clinical associations: SLE, drug-induced SLE or JIA.
Main autoantibodies: Anti-dsDNA, anti-histones or anti-chromatin (anti-nucleosome)

Cytoplasmic Speckled pattern (includes dense fine speckled and fine speckled patterns)
Clinical Associations: anti-synthetase (ARS), SLE, necrotizing myopathy, dermatomyositis
Main autoantibodies: EJ, Jo-1, OJ, PL-7, PL-12, MDA5, ribosomal p, SRP

List of Abbreviations
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).

INTERPRETIVE INFORMATION: ANA Interpretive Comment

Presence of antinuclear antibodies (ANA) is a hallmark feature of systemic autoimmune rheumatic diseases (SARD). However, 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. ANA (cytoplasmic reactivity) positive patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, cytoplasmic speckled or rods and rings. All positive 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. Mitotic staining patterns not reported. Negative results do not necessarily rule out SARD.

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

Smooth Muscle Antibody, IgG Titer

ARUP test code 0051244

Smooth Muscle Ab, IgG Titer	<1:20	(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, Single Pattern (Reflex for 3000082 ANA IFA AB Only Not Orderable by Clients)

ARUP test code 3000083

ANA Pattern	Homogeneous	*
ANA Titer	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	1:80	*
Cytoplasm Pattern	Speckled	*

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

Unless otherwise indicated, testing performed at:

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Soluble Liver Antigen Antibody, IgG	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
F-Actin (Smooth Muscle) Ab, IgG by ELISA	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Liver-Kid Microsome-1 Ab, IgG by ELISA	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Mitochondrial (M2) Antibody, IgG	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Smooth Muscle Ab, IgG Titer	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Antinuclear Antibody (ANA), HEp-2, IgG	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
ANA Pattern	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
ANA Titer	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Cytoplasmic Titer	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
ANA Interpretive Comment	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Cytoplasm Pattern	24-136-401948	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

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
Jonathan R. Genzen, MD, PhD, Laboratory Director

Patient: Patient, Example
ARUP Accession: 24-136-401948
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
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