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

Physician: Doctor, Example

Patient: Patient, Example

DOB	9/8/1943
Gender:	Female
Patient Identifiers:	01234567890ABCD, 012345
Visit Number (FIN):	01234567890ABCD
Collection Date:	00/00/0000 00:00

Interstitial Lung Disease Autoantibody Panel

ARUP test code 3001784

Rheumatoid Factor	<10 IU/mL	(Ref Interval: 0-14)
SSA-52 (Ro52) (ENA) Antibody, IgG	2 AU/mL	(Ref Interval: 0-40)

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.

SSA-60 (Ro60) (ENA) Antibody, IgG	1 AU/mL	(Ref Interval: 0-40)

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

Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG	1 AU/mL	(Ref Interval: 0-40)

INTERPRETIVE INFORMATION: Jo-1 Antibody, IgG

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

Presence of Jo-1 (antihistidyl transfer RNA [t-RNA] synthetase) antibody is associated with polymyositis and may also be seen in patients with dermatomyositis. Jo-1 antibody is associated with pulmonary involvement (interstitial lung disease), Raynaud phenomenon, arthritis, and mechanic's hands (implicated in antisynthetase syndrome).

PL-12 (alanyl-tRNA synthetase) Antibody	Negative	(Ref Interval: Negative)
PL-7 (threonyl-tRNA synthetase) Antibody	Negative	(Ref Interval: Negative)

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

EJ (glycyl-tRNA synthetase) Antibody	Negative	(Ref Interval: Negative)
OJ (isoleucyl-tRNA synthetase) Antibody	Negative	(Ref Interval: Negative)
SRP (Signal Recognition Particle) Ab	Negative	(Ref Interval: Negative)
Ku Antibody	Negative	(Ref Interval: Negative)
PM/Scl 100 Antibody, IgG	Negative	(Ref Interval: Negative)

INTERPRETIVE INFORMATION: PM/Scl-100 Antibody, IgG by Immunoblot

The presence of PM/Scl-100 IgG antibody along with a positive ANA IFA nucleolar pattern is associated with connective tissue diseases such as polymyositis (PM), dermatomyositis (DM), systemic sclerosis (SSc), and polymyositis/systemic sclerosis overlap syndrome. The clinical relevance of PM/Scl-100 IgG antibody with a negative ANA IFA nucleolar pattern is unknown. PM/Scl-100 is the main target epitope of the PM/Scl complex, although antibodies to other targets not detected by this assay may occur.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

MDA5 (CADM-140) Ab	Negative	(Ref Interval: Negative)
NXP2 (Nuclear matrix protein-2) Ab	Negative	(Ref Interval: Negative)
Interpretive Information	See Note	

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

INTERPRETIVE INFORMATION: Interstitial Lung Disease Autoantibodies

If present, myositis-specific antibodies (MSA) are specific for myositis, and may be useful in establishing diagnosis as well as prognosis. MSAs are generally regarded as mutually exclusive with rare exceptions; the occurrence of two or more MSAs should be carefully evaluated in the context of patient's clinical presentation. Myositis-associated antibodies (MAA) may be found in patients with CTD including overlap syndromes, and are generally not specific for myositis. The following table will help in identifying the association of any antibodies found as either MSAs or MAAs.

Antibody Specificity	MSA	MAA
SSA 52 (Ro) (ENA) Antibody IgG		X
SSA 60 (Ro) (ENA) Antibody IgG		X
Smith/RNP (ENA) Ab, IgG		X
Jo-1 (histidyl-tRNA synthetase) Ab, IgG	X	
PL-12 (alanyl-tRNA synthetase) Antibody	X	
PL-7 (threonyl-tRNA synthetase) Antibody	X	
EJ (glycyl-tRNA synthetase) Antibody	X	
OJ (isoleucyl-tRNA synthetase) Antibody	X	
SRP (Signal Recognition Particle) Ab	X	
Ku Antibody		X
PM/SCL 100 Antibody, IgG		X
U2 sn (small nuclear) RNP Antibody		X
Fibrillarin (U3 RNP) Ab, IgG		X
Mi-2 (nuclear helicase protein) Antibody	X	
P155/140 Antibody	X	
TIF-1 gamma (155 kDa) Ab	X	
SAE1 (SUMO activating enzyme) Ab	X	
MDA5 (CADM-140) Ab	X	
NXP2 (Nuclear matrix proten-2) Ab	X	

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Scleroderma (Scl-70) (ENA) Antibody, IgG

0 AU/mL (Ref Interval: 0-40)

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 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.

Cyclic Citrullinated Peptide Ab, IgG	2 Units	(Ref Interval: 0-19)

INTERPRETIVE INFORMATION: Cyclic Citrullinated Peptide Antibody, IgG

```
  19 Units or less ..................... Negative
  20-39 Units .......................... Weak Positive
  40-59 Units .......................... Moderate Positive
  60 Units or greater ................. Strong Positive
```

Anti-cyclic citrullinated peptide (anti-CCP), IgG antibodies are present in about 69-83 percent of patients with rheumatoid arthritis (RA) and have specificities of 93-95 percent. These autoantibodies may be present in the preclinical phase of disease, are associated with future RA development, and may predict radiographic joint destruction. Patients with weak positive results should be monitored and testing repeated.

RNA Polymerase III Antibody, IgG	5 Units	(Ref Interval: 0-19)

INTERPRETIVE INFORMATION: RNA Polymerase III Antibody, IgG

```
  19 Units or less ......Negative
  20 - 39 Units .........Weak Positive
  40 - 80 Units .........Moderate Positive
  81 Units or greater ...Strong Positive
```

The presence of RNA polymerase III IgG antibody, when considered in conjunction with other laboratory and clinical findings, is an aid in the diagnosis of systemic sclerosis (SSc) with increased incidence of skin involvement and renal crisis with the diffuse cutaneous form of SSc. RNA polymerase III IgG antibody occur in about 11-23 percent of SSc patients, and typically in the absence of anti-centromere and anti-Scl-70 antibodies.

A negative result indicates no detectable IgG antibodies to the dominant antigen of RNA polymerase III and does not rule out the possibility of SSc. False-positive results may also occur due to non-specific binding of immune complexes. Strong clinical correlation is recommended.

If clinical suspicion remains, consider additional testing for other antibodies associated with SSc, including centromere, Scl-70, U3-RNP, PM/Scl, or Th/To.

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

ANA Interpretive Comment	See Note	

Antinuclear antibodies by IFA negative for homogeneous, speckled, nucleolar, centromere, and nuclear dots patterns.

Cytoplasmic antibodies by IFA negative for reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, and cytoplasmic speckled patterns.

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

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

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Rheumatoid Factor	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
SSA-52 (Ro52) (ENA) Antibody, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
SSA-60 (Ro60) (ENA) Antibody, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
PL-12 (alanyl-tRNA synthetase) Antibody	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
PL-7 (threonyl-tRNA synthetase) Antibody	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
EJ (glycyl-tRNA synthetase) Antibody	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
OJ (isoleucyl-tRNA synthetase) Antibody	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
SRP (Signal Recognition Particle) Ab	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Ku Antibody	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
PM/Scl 100 Antibody, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
MDA5 (CADM-140) Ab	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
NXP2 (Nuclear matrix protein-2) Ab	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Interpretive Information	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Scleroderma (Scl-70) (ENA) Antibody, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Cyclic Citrullinated Peptide Ab, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
RNA Polymerase III Antibody, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Antinuclear Antibody (ANA), HEp-2, IgG	23-170-122733	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
ANA Interpretive Comment	23-170-122733	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