

500 Chipeta Way, Salt Lake City, Utah 84108-1221

phone: 801-583-2787, toll free: 800-522-2787

Jonathan R. Genzen, MD, PhD, Chief Medical Officer

Patient Age/Sex: 36 years Female

Specimen Collected: 21-Jun-22 15:45**Desmoglein 1 and 3 Antibodies, IgG** | Received: 22-Jun-22 10:01 | Report/Verified: 22-Jun-22 10:10

Procedure	Result	Units	Reference Interval
EER Desmoglein 1 and 3 Antibodies, IgG	See Note ^{f1}		

Desmoglein 1 and 3 Antibodies, IgG | Received: 22-Jun-22 09:57 | Report/Verified: 22-Jun-22 14:15

Procedure	Result	Units	Reference Interval
Desmoglein 1 and 3 Antibodies, IgG	See Note ^{f2}		

Result Footnote

f1: EER Desmoglein 1 and 3 Antibodies, IgG
Authorized individuals can access the ARUP
Enhanced Report using the following link:

f2: Desmoglein 1 and 3 Antibodies, IgG
CLINICAL INFORMATION
Scattered eroded, crusted, and scaling lesions on upper body. Presumptive diagnosis is pemphigus versus
seborrheic dermatitis versus dermatophytosis.

Specimen Details

S22-IP0000504 - Serum; Collected: 6/21/2022; Received: 6/22/2022

DIAGNOSTIC INTERPRETATION

Consistent with pemphigus foliaceus

(See Results and Comments including further testing considerations)

RESULTS

Enzyme-Linked Immunosorbent Assay (ELISA)

Desmoglein (DSG) 1 and 3 IgG Antibodies

IgG desmoglein 1 antibody level: 95 U/mL (H)

Reference Range:

Normal (negative) = Less than 14 U/mL
Borderline/Indeterminate = 14-20 U/mL
Increased (H) (positive) = Greater than 20 U/mL

IgG desmoglein 3 antibody level: 3 U/mL

Reference Range:

Normal (negative) = Less than 9 U/mL
Borderline/Indeterminate = 9-20 U/mL
Increased (H) (positive) = Greater than 20 U/mL

* = Abnormal, # = Corrected, C = Critical, f = Result Footnote, H = High, i = Test Information, L = Low, t = Interpretive Text, @ = Performing lab

Unless otherwise indicated, testing performed at:**ARUP Laboratories**

500 Chipeta Way, Salt Lake City, UT 84108

Laboratory Director: Jonathan R. Genzen, MD, PhD

ARUP Accession: 22-172-118926**Report Request ID:** 16631798**Printed:** 16-Sep-22 08:29

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Result Footnote

f2: Desmoglein 1 and 3 Antibodies, IgG

COMMENTS

Specific

The ELISA results, demonstrating an increased IgG desmoglein 1 antibody level and a normal IgG desmoglein 3 antibody level, support the diagnosis of pemphigus foliaceus. IgG cell surface antibodies by indirect immunofluorescence and IgG desmoglein antibody levels by ELISA correlate with disease activity in pemphigus. IgA cell surface antibodies, which characteristically are positive by indirect immunofluorescence in IgA pemphigus, may be observed in some pemphigus variants along with positive IgG cell surface antibodies.

If indicated to further evaluate the immunopathological profile, additional testing for serum cell surface antibodies by indirect immunofluorescence may be performed on this specimen by contacting ARUP Client Services, 1-800-242-2787, option 2, with add-on test request(s) for:

- Cell Surface (Epithelial) Antibodies, IgG by IIF (ARUP test number 0090266), with or without
- Pemphigus Antibodies, IgA by IIF (ARUP test number 0092106).

Clinical correlation is needed, including with treatment status, with consideration for monitoring antibody profiles by indirect immunofluorescence as well as antibody levels by ELISAs in assessing disease expression and activity, including response to therapy.

General

Pathogenic antibodies in serum from patients with pemphigus bind to desmogleins, calcium-dependent adhesion molecules in cell surface desmosomes; such antibodies are detected by enzyme-linked immunosorbent assay (ELISA). Specific reactivity to the type of desmoglein may be helpful in determining pemphigus subtypes; the IgG desmoglein 1 antibody level is increased in patients with pemphigus foliaceus, and the IgG desmoglein 3 antibody level, with or without an increased IgG desmoglein 1 antibody level, is predominantly increased in patients with pemphigus vulgaris. Overlapping expression with antibodies to both desmogleins 1 and 3 clinically is associated with both mucosal and skin lesions. ELISA testing for IgG desmoglein 1 and IgG desmoglein 3 antibodies is highly sensitive, with greater than 90 percent of patients with pemphigus showing increased levels of one or both antibodies, and IgG desmoglein antibody levels correlate with disease activity. However, patients with cell surface antibody-positive pemphigus by indirect immunofluorescence can have normal results by ELISA testing because of cell surface antibodies to different desmoglein 1 and/or desmoglein 3 epitopes than displayed in the tested ELISAs or to other adhesion molecules.

TESTING METHODS

Enzyme-Linked Immunosorbent Assay (ELISA)

IgG desmoglein 1 and IgG desmoglein 3 serum antibody levels determined by U.S. Food and Drug Administration (FDA)-approved ELISAs (Mesacup, MBL BION). [Two ELISAs]

Electronically signed by Kristin M. Leiferman, MD, on 06/22/22 at 2:12 PM.
 Performed At: IMMUNODERMATOLOGY LABORATORY
 417 S. WAKARA WAY, SUITE 2151
 SALT LAKE CITY, UT 84108
 Medical Director: JOHN JOSEPH ZONE, MD
 CLIA Number: 46D0681916

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