### Desmoglein 1 and Desmoglein 3 Antibodies in Pemphigus, IgG

**ARUP test code 0090649**

<table>
<thead>
<tr>
<th>Desmoglein 1 and 3 Antibodies, IgG</th>
<th>See Note</th>
</tr>
</thead>
</table>

**IMMUNODERMATOLOGY REPORT**

**Specimen(s):**
1. Serum specimen

**Clinical/diagnostic Information:**
No clinical information provided.

**DIAGNOSTIC INTERPRETATION**

Consistent with pemphigus vulgaris

(See Results and Comments)

**RESULTS**

Enzyme-Linked Immunosorbent Assay (ELISA)

Desmoglein (DSG) 1 and 3 IgG Antibodies

<table>
<thead>
<tr>
<th>IgG desmoglein 1 antibodies:</th>
<th>0 units</th>
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Reference Range:
- Positive (H) = Greater than 20 units
- Borderline/Indeterminate = 14-20 units
- Negative = Less than 14 units

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<tr>
<th>IgG desmoglein 3 antibodies:</th>
<th>162 units (H)</th>
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</table>

(Initial level, 138 units, greater than high calibrator; diluted to achieve 81 units, within assay calibrators, and multiplied by the dilution factor of 2)

Reference Range:
- Positive (H) = Greater than 20 units
- Borderline/Indeterminate = 9-20 units
- Negative = Less than 9 units

(H = high/increased; units = units/mL serum)

**COMMENTS**

Specific

These ELISA results, demonstrating an increased IgG desmoglein 3 antibody level and a normal IgG desmoglein 1 antibody level, support the diagnosis of pemphigus vulgaris.

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H=High, L=Low, *=Abnormal, C=Critical
IgG cell surface antibodies by indirect immunofluorescence and IgG desmoglein antibody levels by ELISA testing correlate with disease activity in pemphigus. Additional testing for serum IgG Epithelial Cell Surface Antibodies by indirect immunofluorescence (ARUP test number 0090266) may be performed on this specimen by add-on test request through ARUP Client Services, 1-800-242-2787 option 2, if indicated to further evaluate the immunopathological profile.

Clinical correlation is needed 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.

Serum dilution testing is based on performance assessments of the desmoglein ELISAs in which serum is diluted so that units are within the calibrator range, multiplied by the dilution factor and reported. Other laboratories that do not perform dilution testing may report results analogous to the initial level which is helpful for diagnosis; however, the diluted level likely better represents an antibody parameter for comparison and monitoring disease activity.

Questions about these results, including dilution testing, may be addressed by contacting ARUP Client Services at 1-800-242-2787 option 2 and ask to speak with the Immunodermatology Laboratory at the University of Utah regarding patient results.

General
--------------------------------------------
Antibodies in serum from individuals with pemphigus bind to desmogleins, which are calcium-dependent adhesion molecules in cell surface desmosomes; such antibodies are detected by enzyme-linked immunosorbent assay (ELISA) testing. Desmoglein antibodies are not increased in normal individuals. Specific reactivity to the type of desmoglein may be helpful in determining pemphigus subtypes; IgG desmoglein 1 autoantibodies predominate in patients with pemphigus foliaceus, and IgG desmoglein 3 autoantibodies, with or without accompanying desmoglein 1 autoantibodies, predominate in patients with pemphigus vulgaris. Overlapping expression with autoantibodies to both desmogleins 1 and 3 typically is associated clinically 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 pemphigus patients showing increased levels of one or both antibodies.

TESTING METHODS
Enzyme-Linked Immunosorbent Assay (ELISA)
-----------------------------------------
Desmoglein 1 and desmoglein 3 IgG serum antibody levels and additional desmoglein 3 IgG antibody level with diluted serum for comparative level determined by U.S. Food and Drug Administration-approved ELISAs. (Mesacup, MBL BION). [Three ELISAs]

Kristin M Leiferman, MD
Immunodermatologist
Electronically signed 10/26/2019 5:51:00 PM
Performed at: ARUP - University Hospital Laboratory 50 N. Medical Drive Salt Lake City UT 84132

EER Desmoglein 1 and 3 Antibodies, IgG

See Note

H=High, L=Low, *=Abnormal, C=Critical
Access ARUP Enhanced Report using either link below:

- Direct access:
- Enter Username, Password:
  Username:
  Password:
  Performed at: ARUP - University Hospital Laboratory 50 N. Medical Drive Salt Lake City UT 84132

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<th>Received</th>
<th>Verified/Reported</th>
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