



LABORATORY REPORT

Example Client, XYZ123
1234 Warde Road
Ann Arbor MI 48108

EXAMPLE, REPORT W
WX0000003827 M 07/08/1978 45 Y

Referral Testing

Collected: 08/28/2023 09:47 Received: 08/28/2023 09:47

Table with 6 columns: Test Name, Result, Flag, Ref-Ranges, Units, Site. Row 1: Bullous Pemphigoid Antigens (180 kDa and 230 kDa), IgG, See Note, ARRL

CLINICAL INFORMATION
No clinical information provided.

DIAGNOSTIC INTERPRETATION

Normal Bullous Pemphigoid (BP180 and BP230) Antibodies, IgG by ELISA

(See Results and Comments including further testing recommendations)

RESULTS

Enzyme-Linked Immunosorbent Assay (ELISA)

Bullous Pemphigoid (BP)180 and BP230 IgG Antibodies

IgG BP180 antibody level: 1 U/mL

Reference Range:
Normal (negative) = Less than 9 U/mL
Increased (H) (positive) = 9 U/mL and greater

IgG BP230 antibody level: 5 U/mL

Reference Range:
Normal (negative) = Less than 9 U/mL
Increased (H) (positive) = 9 U/mL and greater

(H) = high/positive
U = antibody level in ELISA units

COMMENTS

Specific

Patients with pemphigoid may show reactivity to multiple basement membrane zone components other than the BP180 and BP230 epitopes displayed in these ELISAs; therefore, these normal results do not rule out a diagnosis of pemphigoid.

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED



LABORATORY REPORT

Example Client, XYZ123
1234 Warde Road
Ann Arbor MI 48108

EXAMPLE, REPORT W
WX0000003827 M 07/08/1978 45 Y

Referral Testing

Collected: 08/28/2023 09:47 Received: 08/28/2023 09:47

Test Name Result Flag Ref-Ranges Units Site

These results also do not rule out treated or evolving pemphigoid or other immunobullous diseases.

Serum testing for IgG and IgA basement membrane zone antibodies or, more broadly, for IgG and IgA basement membrane zone and cell surface antibodies by indirect immunofluorescence and additional ELISAs can provide further immunopathological/diagnostic information. Correlation with additional testing is recommended and may be performed on this serum specimen by contacting ARUP with add-on test request(s) for:

Basement membrane zone antibody-associated diseases (pemphigoid and pemphigoid variants, epidermolysis bullosa acquisita, and linear IgA disease including linear IgA bullous dermatosis) with

- Basement Membrane Zone (Epithelial) Antibodies, IgG by IIF (ARUP test number 0092056) and
- Basement Membrane Zone (Epithelial) Antibodies, IgA by IIF (ARUP test number 0092057) and
- Collagen Type VII Antibody, IgG by ELISA (ARUP test number 2010905);
or

Basement membrane zone and cell surface antibody-associated diseases (pemphigoid and pemphigoid variants, epidermolysis bullosa acquisita, linear IgA disease including linear IgA bullous dermatosis, and pemphigus and pemphigus variants) with

- Basement Membrane Zone and Cell Surface (Epithelial) Antibodies, IgG and IgA by IIF (ARUP test number 0090299) and
- Desmoglein 1 and Desmoglein 3 (Pemphigus) Antibodies, IgG by ELISA (ARUP test number 0090649) and
- Collagen Type VII Antibody, IgG by ELISA (ARUP test number 2010905).

Detection, levels, and patterns of diagnostic antibodies may fluctuate with disease manifestations. Clinical correlation is needed, including with direct immunofluorescence testing on a biopsy specimen and/or treatment status. If there is persistent concern for an immunobullous process, one may consider monitoring the serum antibody profile by indirect immunofluorescence and ELISAs to aid in assessing disease expression and activity, particularly with persistent, progressive, or changing disease.

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

F22800011
WX0000003827
Printed D&T: 09/28/23 11:03

Ordered By: KAJAL SITWALA, MD, PhD
WX0000000002365

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1
PAGE 2 OF 4



LABORATORY REPORT

Example Client, XYZ123
1234 Warde Road
Ann Arbor MI 48108

EXAMPLE, REPORT W
WX0000003827 M 07/08/1978 45 Y

Referral Testing

Collected: 08/28/2023 09:47 Received: 08/28/2023 09:47

Test Name Result Flag Ref-Ranges Units Site

General

Major molecular structures in the basement membrane zone to which IgG pemphigoid antibodies bind have been identified and termed "BP180" for a 180 kDa bullous pemphigoid antigen (also known as bullous pemphigoid antigen 2, BPAG2, or type XVII collagen, COL17) and "BP230" for a 230 kDa bullous pemphigoid antigen (also known as bullous pemphigoid antigen 1, BPAG1). BP180 is a transmembrane component of the basement membrane zone with collagen-like domains; the non-collagenous 16A (NC16A) antigenic domain of BP180 has been identified as a main antigenic target. BP230 is located in the hemidesmosomal plaque of basal cells in the epidermis. Serum levels of IgG BP180 and IgG BP230 antibodies are determined by ELISA, which may be more sensitive than indirect immunofluorescence. Serum levels of IgG BP180 antibodies may correlate with disease activity in pemphigoid, diminishing with treatment response. Up to 7 percent of individuals who do not have pemphigoid, including patients with other immunobullous diseases, have increased levels of IgG BP180 and/or BP230 antibodies by ELISAs. Patients with pemphigoid may show reactivity to multiple basement membrane zone components in addition to or other than the BP180 and BP230 epitopes in the tested ELISAs. Type VII collagen is a component of anchoring fibrils within epithelial basement membrane zone (skin and mucous membranes) and is an antigenic target of IgG autoantibodies in patients with epidermolysis bullosa acquisita and in a subset of patients with bullous lupus erythematosus and, potentially, as overlapping basement membrane zone antibody expression in patients with other epithelial antibody-associated disease.

TESTING METHODS

Enzyme-Linked Immunosorbent Assay (ELISA)

IgG BP180 and IgG BP230 serum antibody levels determined by U.S. Food and Drug Administration (FDA)-approved ELISAs (Mesacup, MBL BION). [Two ELISAs]

Performed At: IMMUNODERMATOLOGY LABORATORY
417 S. WAKARA WAY, SUITE 2151
SALT LAKE CITY, UT 84108
Medical Director: KRISTIN M. LEIFERMAN, MD
CLIA Number: 46D0681916

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED



# LABORATORY REPORT

Example Client, XYZ123  
1234 Warde Road  
Ann Arbor MI 48108

**EXAMPLE, REPORT W**  
WX0000003827 M 07/08/1978 45 Y

## Referral Testing

Collected: 08/28/2023 09:47 Received: 08/28/2023 09:47

<u>Test Name</u>	<u>Result</u>	<u>Flag</u>	<u>Ref-Ranges</u>	<u>Units</u>	<u>Site</u>
EER Bullous Pemphigoid Antigens, IgG	See Note				ARRL

Authorized individuals can access the ARUP Enhanced Report using the following link:

Performed By: ARUP Laboratories  
500 Chipeta Way  
Salt Lake City, UT 84108  
Laboratory Director: Jonathan R. Genzen, MD, PhD  
CLIA Number: 46D0523979

Performing Site:

ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

**Reported Date:** 2023.09.28 11:02 BP

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

F228000011  
WX0000003827

Ordered By: KAJAL SITWALA, MD, PhD  
WX00000000002365

Printed D&T: 09/28/23 11:03

Kajal V. Sitwala, MD, PhD - Medical Director

Form: MM RL1

PAGE 4 OF 4