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**Lab Dept:**                    **Anatomic Pathology**

**Test Name:**                **VAN DER WOUDE SYNDROME (IRF6) GENE SEQUENCING**

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***General Information***

**Lab Order Codes:**        IRF6 (Blood or Buccal Swab)

**Synonyms:**                VWS; VDWS; lip-pit syndrome; cleft lip and/or palate with mucous cysts of lower lip; Popliteal pterygium syndrome; PPS; cleft lip/palate; paramedian mucous cysts of the lower lip; digital and genital abnormalities; faciogenitalpopliteal syndrome

**CPT Codes:**                81479 – Molecular Pathology Unlisted procedure

**Test Includes:**            Analysis is performed by bi-directional sequencing of the coding regions and splice sites of exons 2-9 of the IRF6 gene. Preferential sequencing of exon 4 can be requested for patients with clinical diagnosis of PPS. Mutations found in the first of a family to be tested and is confirmed by repeat analysis using sequencing, restriction fragment analysis, or another appropriate method.

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***Logistics***

**Test Indications:**        Van der Woude syndrome consists of clefting of the lip, palate, or both. Lip pits are seen in 80% of patients, and mucous cysts of the lower lip also may be observed, although they occur less frequently. The disorder is variable, and affected family members often show diverse phenotypic expression. Hypodontia may be present, and individuals may be missing central and lateral incisors, canines and/or bicuspids.

As with Van der Woude syndrome, cleft lip, cleft palate and lip pits are included in the clinical spectrum of Popliteal Pterygium Syndrome. In addition to the orofacial features, 90% of individuals with PPS have popliteal web present and ~50% of patients have genital abnormalities. Toenail dysplasia, syndactyly of the toes and digits, and bony deformities also may be present.

**Reasons for referral:**

1. Confirmation of clinical diagnosis
2. Genetic counseling
3. Identification of a genetic basis for cleft lip/palate in the patient/family.

**Lab Testing Sections:**    Anatomic Pathology - Sendouts

**Referred to:**                GeneDx, Inc. (GDX Test: 253)

**Phone Numbers:**         MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours. Specimens collected Saturday or Sunday will be held for shipment on Monday.

**Turnaround Time:** 4 weeks

**Special Instructions:** A GeneDx signed [request form](#) must be sent with any patient or specimen to the laboratory.

IRF6 can be tested using cells obtained by swabbing the buccal mucosa (inside of cheek). Buccal swab collection kits are available from GeneDx (ph. 301-519-2100).

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### ***Specimen***

**Specimen Type:** Whole blood (preferred specimen)

Buccal cell swab (preferred specimen)

**Container:** Blood: Lavender top (EDTA) tube

Buccal Smear: Cytobrush Plus Cell Collector® kit

**Draw Volume:** 1 - 5 mL blood

2 swabs from the Cytobrush Plus Cell Collector® kit

**Processed Volume:** Same as Draw Volume

**Collection:** Routine blood collection for blood specimens, invert gently to mix

Buccal swab kit for buccal swabs:

#### **Buccal Cell Collection procedure:**

1. Remove a swab from the Buccal swab kit touching only the “stick” end.
2. **Do Not** rinse mouth before starting. Have the individual open his/her mouth. Twirl the swab on the inner cheek for 30 seconds. **Do Not** scrape so hard that the cheek bleeds.
3. Place the swab end in the labeled tube. Cut the “stick” with scissors at the level of the top of the tube. Replace cap and close completely.
4. Repeat the process with another swab on the opposite cheek.
5. Send the kit to the lab for processing and mailing.

**Special Processing:** Lab Staff: Send whole blood in original collection container labeled with patient name, date of birth and medical record number, including signed consent form and requisition, with a cool pack during warm weather, via overnight or second-day courier so that the sample will arrive at GeneDx, Monday through Saturday. Samples drawn on Saturday or Sunday should be held at refrigerated temperatures for shipment on Monday. Refrigerated specimens can be held for 7 days. **Do not** freeze.

**Note:** Specimens may be stored at refrigerated temperatures for up to 7 days prior to shipping.

Mail the Cytobrush Plus Cell Collector® kit, including signed consent form and requisition, by regular mail to GeneDx in the included envelope.

**Patient Preparation:** For buccal cell collection, **Do Not** have the patient rinse his/her mouth.

**Sample Rejection:** Unrefrigerated specimens older than 48 hours; clotted or hemolyzed for blood; frozen specimens; mislabeled or unlabeled specimens

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### ***Interpretive***

**Reference Range:** No mutations detected

**Critical Values:** N/A

**Limitations:** Buccal specimens can only be used for sequencing and are not appropriate for deletion/duplication testing.

**Methodology:** Capillary sequencing

**References:** [GeneDx, Inc.](#) January 2018  
(301) 519-2100 Fax (301) 519-2892

**Updates:** 2/11/2013: CPT update