Lab Dept: Anatomic Pathology

Test Name: VAN DER WOUDE SYNDROME (IRF6) KNOWN MUTATION

General Information

Lab Order Codes: IRFK (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: Testing of a relative for a specific known mutation (carrier testing) where testing was previously done by GeneDx. Using genomic DNA, the exon or exons of interest are screened by bi-directional sequence analysis and/or by non-sequence methods such as heteroduplex analysis or restriction enzyme digestion. The previously tested proband DNA serves as a positive control.

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.

Carrier testing reasons for referral:
1. Testing parents of a child with a specific dominant mutation, in order to determine if the mutation in the child is new or inherited.
2. Carrier testing in parents of a child with apparently homozygous recessive mutations, to rule out the possibility that the child has one mutated allele and one allele that is deleted or refractory to amplification.
3. Carrier testing in the parents of a child with recessive mutations, to confirm that all four parental alleles can be detected prior to prenatal diagnosis.
4. Pre-symptomatic testing in siblings of the index case.
5. Carrier testing in the extended family.

Lab Testing Sections:	Anatomic Pathology - Sendouts
Referred to:	GeneDx, Inc. (GDX#: 9011, Specify gene/mutation)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours (Preferred draws are Sunday - Thursday as specimens can only be received at the reference lab Monday - Friday. Specimens collected Friday or Saturday will be held for shipment on Monday.)
Turnaround Time:	2 - 3 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).

Specimen

Specimen Type:	Whole blood (preferred specimen) Buccal cell swab
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, 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. **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

Interpretive

Reference Range:	Interpretive report
Critical Values:	N/A
Limitations:	Buccal specimens can only be used for sequencing, they 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