

ARPKD Known *PKHD1* Mutation Testing (KT2)

Ordering Information

Acceptable specimen types:

- Fresh blood sample (3-6 ml EDTA; no time limitations associated with receipt)
- Oragene 575 saliva kit (provided by the MGL)
- DNA sample (25ul volume 3ug, O.D. value at 260:280 ≥ 1.8)

Turnaround time:

15 working days

Price, CPT codes, and Z code:

Sequencing 1 exon: \$250 (USD – institutional/self-pay); CPT: 81403

Sequencing 2 exons: \$340 (USD – institutional/self-pay); CPT: 81403 (x2)

MLPA: \$250 (USD – institutional/self-pay); CPT: 81407

Z code: ZB67K

Candidates for this test:

ARPKD testing services are offered to established patients and families with previously identified *PKHD1* variants

Specimen shipping and handling:

- Please find acceptable specimen type above.
- All submitted specimens must be sent at room temperature. DO NOT ship on ice.
- Specimens must be packaged to prevent breakage and absorbent material must be

included in the package to absorb liquids in the event that breakage occurs. Also, the

UAB MEDICAL GENOMICS LABORATORY

package must be shipped in double watertight containers (e.g. a specimen pouch + the shipping company's diagnostic envelope).

- To request a sample collection kit, please visit the website or email medgenomics@uabmc.edu to complete the specimen request form.
- Please contact the MGL (via email at medgenomics@uabmc.edu, or via phone at 205-934-5562) prior to sample shipment and provide us with the date of shipment and tracking number of the package so that we can better ensure receipt of the samples.

Required forms:

- Test Requisition Form
- Form for Customs (for international shipments)

Note: Detailed and accurate completion of this document is necessary for reporting purposes. The Medical Genomics Laboratory issues its clinical reports based on the demographic data provided by the referring institution on the lab requisition form. It is the responsibility of the referring institution to provide accurate information. If an amended report is necessary due to inaccurate or illegible documentation, additional reports will be drafted with charge.

Requests for testing may not be accepted for the following reasons:

- No label (patients full name and date of collection) on the specimens
- No referring physician's or genetic counselor's names and addresses
- No billing information
- DNA samples must be extracted in a CLIA or equivalent certified lab

For more information, test requisition forms, or sample collection and mailing kits, please call: 205-934-5562.

Disorder Background

Autosomal Recessive Polycystic Kidney Disease (ARPKD) is characterized by enlarged cystic kidneys and hepatic fibrosis. The diagnosis is often made pre- or neonatally, but some patients are diagnosed later in life. The severity varies widely, with a high mortality rate in the first months of life. ARPKD is one of the more common hereditary childhood nephropathies with an estimated incidence of 1:20,000-1:40,000. The carrier frequency in the general population is estimated to be 1 in 70 to 1 in 100. Variants in *PKHD1* are scattered throughout the gene. Most families carry their own “private” variants. For more information on the condition please refer to the review on the [GeneTests](#) website and [Online Mendelian Inheritance in Man](#).

The gene for ARPKD, *PKHD1* (*Polycystic Kidney and Hepatic Disease 1*), resides on chromosome 6p21-p12, spans 470 kb of genomic DNA and is the only gene known to be associated with the wide clinical spectrum of autosomal recessive polycystic kidney disease. 86 exons have been identified and multiple alternative transcripts are known. Over 300 variants have been reported. Missense, nonsense, frameshift, splicing and multi-exon deletions can occur and are located throughout the length of the gene, with no major variant hotspots known, as shown in the [PKHD1 variant database](#).

Test Description

We offer **targeted detection** of a previously characterized pathogenic variant within the family. From a fresh EDTA blood sample, DNA is extracted directly and the target region is amplified and directly sequenced. To offer this testing service, the proband’s variant must be identified by our laboratory before testing relatives.

REFERENCES available on website.

Other related testing options:

- ARPKD *PKHD1* Prenatal Targeted Testing (PT2)

UAB MEDICAL GENOMICS LABORATORY

- ARPKD Known *PKHD1* Mutation Linkage Analysis for Informativity (PKDL) & Prenatal Linkage (PKDPL)