UHN Laboratory Medicine

Genome Diagnostics – Hereditary Chronic Kidney Disease

Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Phone: (416) 340-4800 x5739/7624
Fax: (416) 340-4473
Hours of Operation (Mon-Fri) 8:30AM-4:30PM
CAP#: 7175217 CLIA#:99D1106115
IQMH# 4204-site 0141

Patient Information or Hospital Stamp Here
Last Name:

First Name:

Date of Birth (DD/MMM/YYYY):

Sex assigned at birth:

Health Card #:

Hospital #:

Instructions:

1.Complete all information as requested
2.Send requisition with specimen to address above
3.Keep specimen at room temperature unless frozen
4.If shipping, send same day or next day delivery
5.Specimen labelling: **Name, DOB, MRN#**

Referring Physician Signature:_____

Information for Reporting:

Full Name of Referring physician:
Hospital/Address:

Phone:
Fax:
Copy Report To (including fax number)

_____

Specimen Requirements

❑ **Peripheral blood** (5 mL in **EDTA**)

Date collected:_____

❑ **Extracted DNA** from **BLOOD** only [only accepted from an appropriately accredited laboratory (i.e. ACDx or equivalent)]

Conc. _____ Vol._____

Date collected:_____

Test Indication

Please provide any available clinical information and/or complete the Clinical Data Information Sheet.

❑ **Diagnosis** - symptoms/features of condition in THIS individual; please provide clinical details/eligibility on p2

❑ **Known Familial Variant Analysis -** Please provide variant details on Pg. 2 of this requisition

****If no family member has been tested at UHN a positive genetic test report of a family member is required.**

❑ **Other** – Please provide details/justification below

Please ensure you are using an updated version of this requisition, available at
https://www.uhn.ca/Labs/services_clinicians#tab2

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Hereditary Kidney Disease Panel Testing

(See page 3/4 for panel gene content)

- ❑ Amyloidosis (13 genes)
- ❑ CAKUT (99 genes)
- ❑ Complement Mediated Kidney Disease and Atypical Hemolytic Uremic syndrome (aHUS) (14 genes)
- ❑ Cystic Kidney Disease (44 genes)
- ❑ Fabry Disease (*GLA* gene)
- ❑ Proteinuric Kidney Disease (including Collagenopathies) (80 genes)
- ❑ Tubulopathies (including Nephrocalcinosis) (122 genes)
    - ❑ Bartter and Gitelman Syndrome (12 genes)
    - ❑ Dent Disease (2 genes)
    - ❑ Diabetes Insipidus (4 genes)
    - ❑ Hypomagnesemia (17 genes)
    - ❑ Hypophosphatasia & Inherited Hypophosphatemic Rickets (15 genes)
    - ❑ Nephrolithiasis and Nephrocalcinosis (41 genes)
    - ❑ Pseudohypoaldosteronism (11 genes)
    - ❑ Renal Tubular Acidosis (11 genes)
- ❑ Comprehensive Kidney Disease (398 genes)

Familial Variant Analysis

Gene/Variant: _____ Proband Name/UHN MRN_____
(If no family members has been tested at UHN, please include copy of report)

Relationship of this individual to proband: _____

Clinical & Family History

(**TESTING MAY BE PUT ON HOLD IF INSUFFICIENT DETAILS PROVIDED)

PRIMARY Diagnosis:_____

Ethnicity_____

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Version 1.1 May 2026

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Hereditary Kidney Disease Panel Testing - Sequencing + CNV+ analysis

+copy number variant analysis may result in identification and reporting of copy number variants that involve additional OMIM morbid genes not listed below

Amyloidosis Panel (13 genes): *APOA1, APOA2, APOA4, APOC2, B2M, CST3, FGA, GPNMB, GSN, LYZ, NLRP3, OSMR, TTR*

CAKUT Panel (99 genes): *ACE, ACTG2, AFF3, AGT, AGTR1, ALMS1, ANOS1, BNC2, CCNQ, CDX2 , CELSR3, CD151, CENPF, CEP55, CHD7, CHRM3, CHRNA3, COL4A1, CTU2, DDX59, DHCR7, DLG5, DSTYK, DYRK1A, EXOC3L2, EYA1, FAT1, FLCN, FOXC1, FOXP1, FRAS1, FREM1, FREM2, GATA3, GDF6, GFRA1, GLI3, GPC3, GREB1L, GRIP1, HAAO, HNF1B, HOXA13, HPSE2, HS2ST1, HSPA9, ITGA8, JAG1, KAT6b, KDM2B, KCM6A, KIF14, KMT2D, KYNU, LIFR, LRIG2, LRP4, MYOCD, NADSYN1, NEK8, NFIA, NIPBL, NOTCH2, NPHP3, NPNT, NR6A1, NRIP1, OFD1, PAN2, PAX2, PBX1, PLVAP, REN, RET, RMND1, ROBO1, ROBO2, ROR2, SALL1, SALL4, SHROOM4, SLC20A1, SON, STRA6, TBC1D1, TBX18, TBX6, TFAP2A, TMEM260, TOP2B, TRAP1, TXNDC15, WBP11, WLS, WDR72, WNT5A, WT1, ZIC3, ZMYM2*

Complement Mediated Kidney Disease and Atypical Hemolytic Uremic Syndrome (aHUS) Panel (14 genes): *C1GALT1C1, C3, C5, CD46, CFB, CFH, CFHR1, CFHR2, CFHR3, CFHR5, CFI, DGKE, MMACHC, TSEN2*

Cystic Kidney Disease Panel (44 genes): *ALG5, ALG8, ALG9, ANKS6, C2CD3, CEP104, CEP164, CEP83, CLCN5, COL4A1, CYP24A1, DCDC2, DNAJB11, DZIP1L, FLCN, GANAB, GLA, GLIS2, HNF1B, IFT140, INVS, IQCB1, MAPKBP1, MKS1, NEK8, NPHP1, NPHP3, NPHP4,OFD1, PAX2, PKD1, PKD2, PKHD1, PMM2, PRKCSH, SEC63, TMEM67, TSC1, TSC2, TTC21B, TULP3, UMOD, WDR19, XPNPEP3*

Proteinuric Kidney Disease (including Collagenopathies) Panel (80 genes): *ACTN4, ALMS1, AMN, ANLN, APOA1, APOA2, APOA4, APOC2, APOE, APOL1, ARHGDIA, CD151, CD2AP, CLCN5, COL4A1, COL4A3, COL4A4, COL4A5, COQ2, COQ6, COQ8B, CRB2, CTNS, CUBN, DAAM2, DGKE, DLC1, FAT1, FN1, GLA, GON7, INF2, ITGA3, ITSN1, ITSN2, KANK2, LAGE3, LAMA5, LAMB2, LCAT, LMX1B, LRP2, MAFB, MAGI2, MTX2, MYH9, MYO1E, NOS1AP, NPHS1, NPHS2, NUP107, NUP133, NUP160, NUP85, NUP93, OCRL, OSGEP, P3H2, PAX2, PBX1, PDSS2, PLCE1, PODXL, PRDM15, PTPRO, REN, SCARB2, SGPL1, SMARCAL1, TBC1D8B, TNS2, TP53RK, TPRK, TRIM8, TRPC6, TTC21B, UMOD, WDR73, WT1, YRDC*

Tubulopathies (including Nephrocalcinosis) Panel (122 genes): *AGXT, AIRE, ALPL, AMMECR1, AP2S1, APRT, AQP2, ATP1A1, ATP6V0A4, ATP6V1B1, AVP, AVPR2, BCS1L, BSND, CA2, CACNA1D, CACNA1H, CACNA1S, CASR, CDC73, CDKN1B, CLCN2, CLCN5, CLCNKA, CLCNKB, CLDN10, CLDN16, CLDN19, CNNM2, CPT2, CTNS, CUL3, CYP11B1, CYP11B2, CYP17A1, CYP21A2, CYP24A1, CYP27B1, CYP2R1, DMP1, EHHADH, ENPP1, FAH, FAM111A, FAM20A, FAM20C, FGF23, FOXI1, FXYD2, GALNT3, GATA3, GATM, GCM2, GLA, GNA11, GNAS, GRHPR, HNF1B, HNF4A, HOGA1, HPRT1, HSD11B2, HSD3B2, KCNA1, KCNJ1, KCNJ10, KCNJ16, KCNJ5, KLHL3, LCAT, LRP2, MAGED2, MEN1, MMUT, MOCOS, NDUFAF6, NR3C1, NR3C2, OCRL, PCBD1, PDE3A, PHEX, PTH, PTH1R, REN, RET, RMND1, RRAGD, RRM2B, SARS2, SCN4A, SCNN1A, SCNN1B, SCNN1G, SEC61A1, SLC12A1, SLC12A3, SLC22A12, SLC2A2, SLC2A9, SLC34A1, SLC34A3, SLC3A1, SLC4A1, SLC4A4, SLC5A2, SLC6A1, SLC7A7, SLC7A9, STRADA, STX16, TBCE, TRPM6, TRPM7, UMOD, VDR, VIPAS39, VPS33B, WDR72, WNK1, WNK4, XDH*

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+may result in identification and reporting of copy number variants that involve additional OMIM morbid genes not listed below

Tubulopathies - Subpanels

Bartter and Gitelman Syndrome Panel (12 genes): *BSND, CASR, CLCNKA, CLCNKB, CLDN16, CLDN19, GNA11, HSD11B2, KCNJ1, MAGED2, SLC12A1, SLC12A3*

Dent Disease Panel (2 genes): *CLCN5, OCRL*

Diabetes Insipidus Panel (4 genes): *AQP2, AVP, AVPR2, STRADA*

Hypomagnesemia Panel (17 genes): *ATP1A1, BSND, CASR, CLCNKB, CLDN16, CLDN19, CNNM2, FAM111A, FXYD2, HNF1B, KCNA1, KCNJ10, RRAGD, SARS2, SLC12A3, TRPM6, TRPM7*

Hypophosphatasia and Inherited Hypophosphatemic Rickets Panel (15 genes): *ALPL, CLCN5, CTN2, CYP27B1, CYP2R1, DMP1, ENPP1, FAH, FAM20C, FGF23, OCRL, PHEX, SLC34A1, SLC34A3, VDR*

Nephrolithiasis and Nephrocalcinosis Panel (41 genes): *AGXT, ALPL, AMMECR1, APRT, ATP6V0A4, ATP6V1B1, BSND, CA2, CASR, CLCN5, CLCNKB, CLDN10, CLDN16, CLDN19, CTNS, CYP24A1, FAM20A, GRHPR, HNF4A, HOGA1, HPRT1, KCNJ1, MOCOS, OCRL, PHEX, PTH1R, RRAGD, SLC12A1, SLC22A12, SLC2A9, SLC34A1, SLC34A3, SLC3A1, SLC4A1, SLC7A9, STRAD, VDR, VIPAS39, VPS33B, WDR72, XDH*

Pseudohypoaldosteronism Panel (11 genes): *CUL3, HSD11B2, KCNJ5, KLHL3, NR3C1, NR3C2, SCNN1A, SCNN1B, SCNN1G, WNK1, WNK4*

Renal Tubular Acidosis Panel: (11 genes): *ATP6V0A4, ATP6V1B1, CA2, FOXI1, GATM, HNF4A, RMND1, SLC4A1, SLC4A4, VIPAS39, WDR72*

Comprehensive Kidney Disease Panel (398 genes): All genes currently on the disease-specific panels, plus the following genes associated with ciliopathies, and tubulointerstitial kidney disease: *AHI1, ALG1, ARL13B, ARL6, ARMC9, B9D1, B9D2, BBIP1, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, CC2D2A, CEP290, CEP41, CILK1, CPLANE1, CSPP1, DYNC2H1, DYNC2I1, FAN1, HYLS1, IFT122, IFT172, IFT27, IFT43, IFT74, KATNIP, KIAA0586, K1AA0753, KIF7, LZTFL1, MKKS, MT-TF, MUC1*, NEK1, NPR1, PDIA6, PIBF1, PMPCA, PSKH1, RPGRIP1L, SCLT1, SDCCAG8, TCTN1, TCTN2, TCTN3, TMEM107, TMEM138, TMEM17, TMEM216, TMEM231, TMEM237, IFT54 (TRAF3IP1), TTC8, WDPCP, WDR35, ZNF423*

***the majority of pathogenic MUC1 variants are not detected using current technology; if clinically indicated contact gcConnect for information about additional MUC-1 testing**

FOR ALL HEREDITARY KIDNEY DISEASE TESTS PLEASE ENSURE CLINICAL INFORMATION IS PROVIDED ON PAGE 2

For eligibility please see OH Genetics Guidance
or contact gcConnect (https://www.ontariohealth.ca/clinical/genetics/gcconnect**)**