**Supplementary Table S1: Detailed list of covered genes with gene code, associated OMIM number, and mean coverage per gene.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Polycystic kidneys / Ciliopathies | Glomerulopathies | aHUS/TMA | CAKUT | TUBULOPATHIES | ADTKD | METABOLIC DISORDERS AND OTHERS | GENE SYMBOL | GENE NAME | OMIM | MEAN COVERAGE |
|  | **x** |  | **x** |  |  |  | ***ACE*** | angiotensin-I converting enzyme | 106180 | 139 |
|  | **x** |  |  |  |  |  | ***ACTN4*** | actinin-4 | 604638 | 119 |
|  |  | **x** |  |  |  |  | ***ADAMTS13*** | von Willebrand cleaving protease | 604134 | 154 |
|  |  |  |  |  |  | **x** | ***ADCY10*** | adenylate cyclase 10 | 605205 | 81 |
|  | **x** |  | **x** |  |  |  | ***AGT*** | angiotensinogen | 106150 | 157 |
|  | **x** |  | **x** |  |  |  | ***AGTR1*** | angiotensin II receptor, type 1 | 106165 | 131 |
|  |  |  |  |  |  | **x** | ***AGXT*** | alanine-glyoxylate aminotransferase | 604285 | 173 |
| **x** |  |  |  |  |  |  | ***AHI1*** | Abelson helper integration site 1 | 608894 | 100 |
|  | **x** |  |  |  |  |  | ***ALG13*** | asparagine-linked glycosylation 13 | 300776 | 232 |
| **x** |  |  | **x** |  |  |  | ***ALG9*** | alpha-1,2-mannosyltransferase | 606941 | 165 |
| **x** |  |  |  |  |  |  | ***ALMS1*** | centrosome and basal body associated protein 1 | 606844 | 132 |
|  | **x** |  |  |  |  | **x** | ***APOA1*** | apolipoprotein A-1 | 107680 | 55 |
|  | **x** |  |  |  |  |  | ***APOE*** | lipoprotein glomerulopathy | 107741 | 77 |
|  | **x** |  |  |  |  |  | ***APOL1*** | apolipoprotein L-1 | 603743 | 98 |
|  | **x** |  |  |  |  | **x** | ***APRT*** | adenine phosphoribosyltransferase | 102600 | 165 |
|  | **x** |  |  |  |  |  | ***ARHGAP24*** | Rho GTPase-Activation protein 24 | 610586 | 215 |
| **x** |  |  |  |  |  |  | ***ARL13B*** | ADP-ribosylation factor-like 13B | 608922 | 195 |
| **x** |  |  |  | **x** |  |  | ***ARL6*** | ADP-ribosylation factor-like 6 | 608845 | 215 |
|  |  |  |  | **x** |  |  | ***ATP6V0A4*** | ATPase, H+ transporting, lysosomal V0, subunit a4 | 605239 | 90 |
|  | **x** |  |  | **x** |  |  | ***ATP6V1B1*** | ATPase, H+ transporting, lysosomal 56/58, V1, subunit B1 | 192132 | 163 |
| **x** |  |  |  |  |  |  | ***ATXN10*** | ataxin 10 | 611150 | 177 |
|  | **x** |  |  |  |  | **x** | ***B2M*** | beta2-microglobulin | 109700 | 141 |
| **x** |  |  |  |  |  |  | ***B9D1*** | B9 protein domain 1 | 614144 | 145 |
| **x** |  |  |  |  |  |  | ***B9D2*** | B9 protein domain 2 | 611951 | 60 |
| **x** |  |  |  |  |  |  | ***BBS1*** | Bardet-Biedl syndrome 1 | 209901 | 118 |
| **x** |  |  |  |  |  |  | ***BBS10*** | chromosome 12 open reading frame 58 | 610148 | 221 |
| **x** |  |  |  |  |  |  | ***BBS12*** | Bardet-Biedl syndrome 12 | 610683 | 177 |
| **x** |  |  |  |  |  |  | ***BBS2*** | Bardet-Biedl syndrome 2 | 606151 | 126 |
| **x** |  |  |  |  |  |  | ***BBS4*** | Bardet-Biedl syndrome 4 | 600374 | 110 |
| **x** |  |  |  |  |  |  | ***BBS5*** | Bardet-Biedl syndrome 5 | 603650 | 102 |
| **x** |  |  |  |  |  |  | ***BBS7*** | Bardet-Biedl syndrome 7 | 607590 | 181 |
| **x** |  |  |  |  |  |  | ***BBS9*** | parathyroid hormone-responsive B1 | 607968 | 92 |
|  | **x** |  | **x** |  |  |  | ***BMP4*** | bone morphogenetic protein 4 | 112262 | 114 |
|  |  |  |  | **x** |  |  | ***BSND*** | barttin | 606412 | 87 |
|  | **x** | **x** |  |  |  |  | ***C3*** | complement component 3 | 120700 | 140 |
| **x** |  |  |  |  |  |  | ***C5ORF42*** | chromosome 5 open reading frame 42 | 614571 | 271 |
|  |  |  |  | **x** |  |  | ***CA2*** | carboanhydrase II | 611492 | 187 |
|  |  |  |  |  |  | **x** | ***CASR*** | calcium sensing receptor | 601199 | 136 |
| **x** |  |  |  |  |  |  | ***CC2D2A*** | coiled-coil and C2 domain containing 2A | 612013 | 146 |
|  | **x** |  |  |  |  |  | ***CD2AP*** | CD2 associated potein | 604241 | 124 |
|  | **x** | **x** |  |  |  |  | ***CD46*** | membrane cofactor protein | 120920 | 131 |
| **x** |  |  |  |  |  |  | ***CEP290*** | centrosomal protein 290kDa | 610142 | 139 |
| **x** |  |  |  |  |  |  | ***CEP41*** | centrosomal protein 41 | 610523 | 104 |
|  | **x** | **x** |  |  |  |  | ***CFB*** | complement factor B | 138470 | 123 |
|  | **x** | **x** |  |  |  |  | ***CFH*** | complement factor h | 134370 | 155 |
|  | **x** | **x** |  |  |  |  | ***CFHR1*** | complement factor h related protein 1 | 134371 | 199 |
|  |  | **x** |  |  |  |  | ***CFHR2*** | complement factor h related protein 2 | 600889 | 193 |
|  |  | **x** |  |  |  |  | ***CFHR3*** | complement factor h related protein 3 | 605336 | 193 |
|  |  | **x** |  |  |  |  | ***CFHR4*** | complement factor h related protein 4 | 605337 | 204 |
|  |  | **x** |  |  |  |  | ***CFHR5*** | complement factor h related protein 5 | 608593 | 128 |
|  | **x** | **x** |  |  |  |  | ***CFI*** | complement component I | 217030 | 145 |
|  |  |  | **x** |  |  |  | ***CHD1L*** | chromodomain helicase DNA binding protein 1-like | 613039 | 166 |
|  | **x** |  | **x** |  |  |  | ***CHRM3*** | muscarinic acetycholin receptro type 3 | 118494 | 219 |
|  | **x** |  |  | **x** |  |  | ***CLCN5*** | H+/Cl- exchanging receptor | 300008 | 207 |
|  |  |  |  | **x** |  |  | ***CLCNKB*** | chloride channel, voltage sensitive Kb | 602023 | 148 |
|  |  |  |  | **x** |  |  | ***CLDN16*** | claudin 16 | 603959 | 197 |
|  |  |  |  | **x** |  |  | ***CLDN19*** | claudin 19 | 610036 | 78 |
|  | **x** |  |  |  |  |  | ***COL4A1*** | collagen type 4 α1 | 120130 | 161 |
|  | **x** |  |  |  |  |  | ***COL4A3*** | collagen type 4 α3 | 120070 | 135 |
|  | **x** |  |  |  |  |  | ***COL4A4*** | collagen type 4 α4 | 120131 | 181 |
|  | **x** |  |  |  |  |  | ***COL4A5*** | collagen type 4 α5 | 303630 | 206 |
|  | **x** |  |  |  |  |  | ***COL4A6*** | collagen type 4 α6 | 303631 | 234 |
|  | **x** |  |  |  |  |  | ***COQ2*** | coenzyme Q2 4-hydroxybenzoate polyprenyltransferase | 609825 | 188 |
|  | **x** |  |  |  |  |  | ***COQ6*** | coenzyme Q6 monooxygenase | 614647 | 154 |
|  |  |  |  | **x** |  |  | ***CTNS*** | cystinosin | 606272 | 94 |
|  |  |  |  | **x** |  |  | ***CUBN*** | cubilin | 602997 | 105 |
|  |  |  |  | **x** |  | **x** | ***CUL3*** | cullin 3 | 603136 | 123 |
|  |  |  |  |  |  | **x** | ***CYP11B1*** | cytochrome P450, subfamily 11B, polypeptide 1 | 610613 | 139 |
|  |  |  |  |  |  | **x** | ***CYP17A1*** | cytochrome P450, family 17, subfamily A, polypeptide 1 | 609300 | 97 |
|  | **x** |  |  |  |  | **x** | ***CYP24A1*** | cytochrome P450, family 24, subfamily A, polypeptide 1 | 126065 | 96 |
| **x** |  |  |  |  |  |  | ***DCDC2*** | doublecortin domain containing 2 | 605755 | 266 |
|  |  |  |  |  |  | **x** | ***DIS3L2*** | exoribonuclease 2 | 614184 | 137 |
|  |  |  |  | **x** |  |  | ***DMP1*** | dentin matrix acidic phosphoprotein 1 | 600980 | 140 |
| **x** |  |  |  |  |  |  | ***DYNC2H1*** | dynein, cytoplasmic 2, heavy chain 1 | 603297 | 106 |
|  | **x** |  |  | **x** |  |  | ***ENPP1*** | ectonucleotide pyrophosphatase/phosphodiesterase 1 | 173335 | 122 |
|  |  |  | **x** |  |  |  | ***EYA1*** | eyes absent homolog 1 | 601653 | 126 |
|  |  |  |  |  |  | **x** | ***FAM20A*** | pseudokinase FAM20A | 611062 | 93 |
|  | **x** |  |  |  |  | **x** | ***FGA*** | fibrinogen alpha polypeptide | 134820 | 155 |
|  |  |  | **x** |  |  |  | ***FGF20*** | fibroblast growth factor 20 | 605558 | 118 |
|  | **x** |  |  |  |  | **x** | ***FGFR1*** | fibroblast growth factor receptor 1 | 136350 | 140 |
|  | **x** |  |  |  |  |  | ***FN1*** | fibronectin 1 | 135600 | 149 |
|  |  |  | **x** |  |  |  | ***FRAS1*** | extracellular matrix protein FRAS1 | 607830 | 176 |
|  |  |  | **x** |  |  |  | ***FREM1*** | FRAS1 related extracellular matrix proteins 1 | 608944 | 167 |
|  |  |  | **x** |  |  |  | ***FREM2*** | FRAS1 related extracellular matrix proteins 2 | 608945 | 122 |
|  | **x** |  | **x** |  |  |  | ***GATA3*** | GAT binding protein 3 | 131320 | 89 |
|  |  |  |  |  |  | **x** | ***GLA*** | alpha-galactosidase A | 300644 | 181 |
| **x** |  |  |  |  |  |  | ***GLIS2*** | GLIS family zinc finger 2 | 608539 | 130 |
|  | **x** |  |  |  |  | **x** | ***GPC3*** | glypican 3 | 300037 | 233 |
|  |  |  |  |  |  | **x** | ***GRHPR*** | glyoxylate reductase/hydroxypyruvate reductase | 604296 | 161 |
|  |  |  | **x** |  |  |  | ***GRIP1*** | glutamate receptor interacting protein 1 | 604597 | 194 |
|  | **x** |  | **x** |  | **x** |  | ***HNF1B*** | HNF1 homeobox B | 189907 | 176 |
|  |  |  |  |  |  | **x** | ***HNF4A*** | hepatocyte nuclear factor 4α | 600281 | 97 |
|  |  |  |  |  |  | **x** | ***HOGA1*** | 4-hydroxy-2-oxoglutarate aldolase 1 | 613597 | 175 |
|  |  |  |  |  |  | **x** | ***HPRT1*** | hypoxanthine phosphoribosyltransferase 1 | 308000 | 163 |
|  |  |  | **x** |  |  |  | ***HPSE2*** | inactive heparinase 2 | 613469 | 127 |
|  |  |  |  |  |  | **x** | ***HSD11B2*** | 11-beta-hydroxysteroid dehydrogenase type 2 | 614232 | 191 |
| **x** |  |  |  |  |  |  | ***IFT122*** | intraflagellar transport 122 | 606045 | 217 |
| **x** |  |  |  |  |  |  | ***IFT140*** | intraflagellar transport 140 | 614620 | 139 |
| **x** |  |  |  |  |  |  | ***IFT43*** | intraflagellar transport 43 | 614068 | 112 |
| **x** |  |  |  |  |  |  | ***IFT80*** | intraflagellar transport 80 homolog | 611177 | 138 |
|  | **x** |  |  |  |  |  | ***INF2*** | inverted formin-2 (alt: HBEBP2-binding protein C) | 610982 | 128 |
| **x** |  |  |  |  |  |  | ***INPP5E*** | inositol polyphosphate-5-phosphatase | 613037 | 67 |
| **x** |  |  |  |  |  |  | ***INVS*** | inversin | 243305 | 141 |
| **x** |  |  |  |  |  |  | ***IQCB1*** | IQ motif containing B1 | 609237 | 194 |
|  | **x** |  |  |  |  |  | ***ITGA3*** | integrin alpha 3 | 605025 | 126 |
|  | **x** |  |  |  |  |  | ***ITGB4*** | integrin beta 3 | 147557 | 141 |
|  | **x** |  |  |  |  |  | ***JAG1*** | jagged 1 | 601920 | 141 |
|  |  |  | **x** |  |  |  | ***KAL1*** | anosmin 1 | 300836 | 231 |
|  | **x** |  |  |  |  |  | ***KANK1*** | Kn motif and ankyrin repeat domain containing proteins 1 | 607704 | 123 |
|  |  |  |  | **x** |  |  | ***KCNJ1*** | ATP-sensitive inward rectifier potassium channel 1 | 600359 | 236 |
|  |  |  |  | **x** |  | **x** | ***KCNJ5*** | potassium channel inwardly rectifying, subfamily J, member 5 | 600734 | 164 |
| **x** |  |  |  |  |  |  | ***KIF7*** | kinesin family member 7 | 611254 | 140 |
|  |  |  |  | **x** |  | **x** | ***KLHL3*** | kelch-like 3 | 605775 | 122 |
|  | **x** |  |  |  |  |  | ***LAMB2*** | laminin beta 2 | 150325 | 132 |
|  | **x** |  |  |  |  |  | ***LMX1B*** | LIM homebox transcription factor 1β | 602575 | 154 |
|  |  |  | **x** |  |  |  | ***LRP4*** | low density lipoprotein receptor-related portein | 604270 | 113 |
|  | **x** |  |  |  |  | **x** | ***LYZ*** | lysozyme | 153450 | 258 |
| **x** |  |  |  |  |  |  | ***LZTFL1*** | leucine zipper transcription factor like 1 | 606568 | 157 |
|  | **x** |  |  |  |  |  | ***MAGI2*** | membrane-associated guanylate kinase | 606382 | 100 |
| **x** |  |  |  |  |  |  | ***MKKS*** | McKusick-Kaufman syndrome | 604896 | 121 |
| **x** |  |  |  |  |  |  | ***MKS1*** | Meckel syndrome, type 1 | 609883 | 105 |
|  |  | **x** |  |  |  |  | ***MMACHC*** | methylmalonic aciduria (cobalamin deficiency) cblC type, with homocystinuria | 609831 | 219 |
|  | **x** |  |  |  |  |  | ***MPV17*** | mitochondrial inner membrane protein | 137960 | 107 |
|  |  |  |  |  | **x** |  | ***MUC1*** | mucin 1 | 158340 | 136 |
|  | **x** |  |  |  |  |  | ***MYH9*** | myosin heavy chain 9 | 160775 | 114 |
|  | **x** |  |  |  |  |  | ***MYO1E*** | myosin 1E | 601479 | 140 |
| **x** |  |  |  |  |  |  | ***NEK1*** | never in mitosis gene A-related kinase 1 | 604588 | 114 |
| **x** |  |  |  |  |  |  | ***NEK8*** | never in mitosis gene A-related kinase 8 | 609799 | 168 |
| **x** |  |  |  |  |  |  | ***NPHP1*** | nephrocystin-1 | 607100 | 120 |
| **x** |  |  |  |  |  |  | ***NPHP3*** | nephrocystin-3 | 608002 | 132 |
| x |  |  |  |  |  |  | ***NPHP4*** | nephroretinin | 607215 | 140 |
|  | x |  |  |  |  |  | ***NPHS1*** | nephrin | 602716 | 162 |
|  | x |  |  |  |  |  | ***NPHS2*** | podocin | 604766 | 185 |
|  |  |  |  |  |  | x | ***NR3C2*** | nuclear receptor subfamily 3 groub C member 2 | 600983 | 144 |
|  | **x** |  |  |  |  |  | ***NXF5*** | nuclear RNA export factor 5 | 300319 | 191 |
|  |  |  |  | x |  | **x** | ***OCRL*** | inositol polyphosphate-5-phosphatase OCRL-1 | 300535 | 286 |
| **x** |  |  |  |  |  |  | ***OFD1*** | oral-facial-digital syndrome 1 | 300170 | 262 |
|  | **x** |  | x |  |  |  | ***PAX2*** | homo sapiens paired box 2 | 167409 | 126 |
|  | x |  |  |  |  |  | ***PDSS2*** | decaprenyl-diphosphate synthase subunit2 | 610564 | 159 |
|  |  |  |  | x |  |  | ***PHEX*** | phosphat-regulating endopeptidase homolog | 300550 | 216 |
| x |  |  |  |  |  |  | ***PKD1*** | polycystin 1 | 601313 | 143 |
| x |  |  |  |  |  |  | ***PKD2*** | polycystin 2 | 173910 | 98 |
| x |  |  |  |  |  |  | ***PKHD1*** | polycystic kidney and hepatic disease 1 (fibrocystin) | 606702 | 149 |
|  | **x** |  |  |  |  |  | ***PLCE1*** | phospholipase C epsilon 1 | 608414 | 120 |
|  | **x** |  |  |  |  |  | ***PTPRO*** | receptor-type tyrosine-protein phosphatase 2 | 600579 | 142 |
|  |  |  |  |  | x |  | ***REN*** | renine | 179820 | 122 |
|  | x |  | x |  |  |  | ***RET*** | proto-oncogene tyrosine-protein kinase receptor Ret | 164761 | 129 |
|  |  |  | x |  |  |  | ***ROBO2*** | roundabout guidance receptor 2 | 602431 | 169 |
| x |  |  |  |  |  |  | ***RPGRIP1L*** | RPGRIP1-like | 610937 | 130 |
|  |  |  | x |  |  |  | ***SALL1*** | Sal-like protein 1 | 602218 | 199 |
|  | **x** |  |  |  |  |  | ***SCARB2*** | lysosome membrane protein 2 | 602257 | 140 |
|  |  |  |  | x |  | x | ***SCNN1B*** | sodium channel nonvoltage-gated 1, beta subunit | 600760 | 98 |
|  |  |  |  | x |  | x | ***SCNN1G*** | sodium channel nonvoltage-gated 1, gamma subunit | 600761 | 120 |
| **x** |  |  |  |  |  |  | ***SDCCAG8*** | serologically defined colon cancer antigen 8 | 613542 | 114 |
|  |  |  |  |  |  | x | ***SDHA*** | succinate dehydrogenase complex subunit A | 600857 | 145 |
|  |  |  |  |  |  | x | ***SDHAF2*** | succinate dehydrogenase complex assembly factor 2 | 613019 | 158 |
|  | x |  |  |  |  | x | ***SDHB*** | succinate dehydrogenase complex subunit B | 185470 | 143 |
|  |  |  |  |  |  | x | ***SDHC*** | succinate dehydrogenase complex subunit C | 602413 | 307 |
|  |  |  |  |  |  | x | ***SDHD*** | succinate dehydrogenase complex subunit D | 602690 | 166 |
|  |  |  | x |  |  |  | ***SIX1*** | SIX homeobox 1, 2 and 5 | 601205 | 79 |
|  |  |  | x |  |  |  | ***SIX2*** | SIX homebox 2 | 604994 | 114 |
|  |  |  | x |  |  |  | ***SIX5*** | SIX homeobox 5 | 600963 | 194 |
|  |  |  |  | **x** |  |  | ***SLC12A1*** | solute carrier family 12, member 1 | 600839 | 81 |
|  |  |  |  | x |  |  | ***SLC12A3*** | solute carrier family 12, member 3 | 600968 | 148 |
|  | x |  |  | x |  |  | ***SLC1A1*** | solute carrier family 1, member 1 | 133550 | 107 |
|  |  |  |  | x |  |  | ***SLC22A12*** | solute carrier family 22, member 12 | 607096 | 128 |
|  |  |  |  | x |  |  | ***SLC26A1*** | solute carrier family 26, member 1 | 610130 | 70 |
|  | x |  |  | x |  |  | ***SLC2A2*** | solute carrier familiy 2, member 2 | 138160 | 117 |
|  |  |  |  | **x** |  |  | ***SLC2A9*** | solute carrier family 2, member 9 | 606142 | 171 |
|  | x |  |  | **x** |  |  | ***SLC34A1*** | solute carrier family 34, member 1 | 182309 | 134 |
|  |  |  |  | **x** |  |  | ***SLC34A3*** | solute carrier family 34, member 3 | 609826 | 110 |
|  | x |  |  | x |  |  | ***SLC3A1*** | solute carrier family 3, member 1 | 104614 | 93 |
|  | **x** |  |  | x |  |  | ***SLC4A1*** | solute carrier family 4, anion exchanger, member 1 | 109270 | 118 |
|  |  |  |  | x |  |  | ***SLC4A4*** | solute carrier family 4, member 4 | 603345 | 171 |
|  | x |  |  | x |  |  | ***SLC5A2*** | solute carrier family 5, member 2 | 182381 | 118 |
|  |  |  |  | x |  |  | ***SLC7A7*** | solute carrier family 7, member 7 | 603593 | 156 |
|  |  |  |  | x |  |  | ***SLC7A9*** | solute carrier family 7, member 9 | 604144 | 120 |
|  |  |  |  | x |  |  | ***SLC9A3R1*** | solute carrier family 9, member 3, receptor 1 | 604990 | 140 |
|  | x |  |  |  |  |  | ***SMARCAL1*** | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a like 1 | 606622 | 109 |
|  |  |  | x |  |  |  | ***SOX17*** | transcription factor for SOX17 | 610928 | 60 |
| x |  |  |  |  |  |  | ***TCTN1*** | tectonic family member 1 | 609863 | 88 |
| **x** |  |  |  |  |  |  | ***TCTN2*** | tectonic family member 2 | 613846 | 106 |
|  | **x** | x |  |  |  |  | ***THBD*** | thrombomodulin | 188040 | 86 |
| **x** |  |  |  |  |  |  | ***TMEM138*** | transmembrane protein 138 | 614459 | 156 |
| **x** |  |  |  |  |  |  | ***TMEM216*** | transmembrane protein 216 | 613277 | 183 |
| x |  |  |  |  |  |  | ***TMEM237*** | transmembrane protein 237 | 614423 | 152 |
| **x** |  |  |  |  |  |  | ***TMEM67*** | transmembrane protein 67 | 609884 | 160 |
|  |  |  | x |  |  |  | ***TNXB*** | tenascin XB | 600985 | 153 |
| x |  |  |  |  |  |  | ***TRAF3IP1*** | TNF receptor-associated factor 3-interacting | 607380 | 125 |
| x |  |  |  | X |  |  | ***TRIM32*** | tripartite motif containing 32 | 602290 | 270 |
|  | **x** |  |  |  |  |  | ***TRPC6*** | transient receptor potential cation channel, subfamily C, member 6 | 603652 | 120 |
| **x** |  |  |  |  |  |  | ***TSC1*** | tuberous sclerosis complex 1 | 605284 | 112 |
| x |  |  |  |  |  |  | ***TSC2*** | tuberous sclerosis complex 2 | 191092 | 111 |
| **x** |  |  |  |  |  |  | ***TTC21B*** | tetratricopeptide repeat domain 21B | 612014 | 125 |
| **x** |  |  |  | x |  |  | ***TTC8*** | tetratricopeptide repeat domain 8 | 608132 | 116 |
|  | **x** |  | x |  | x |  | ***UMOD*** | uromodulin | 191845 | 130 |
|  |  |  | **x** |  |  |  | ***UPK3A*** | uroplakin 3A | 611559 | 180 |
|  |  |  |  |  |  | x | ***VDR*** | vitamin D receptor | 601769 | 159 |
| **x** |  |  |  |  |  |  | ***VHL*** | von Hippel-Lindau | 608537 | 52 |
| x |  |  |  |  |  |  | ***WDPCP*** | WD repeat containing planar cell polarity effector | 613580 | 130 |
| x |  |  |  |  |  |  | ***WDR19*** | WD repeat domain 19 | 608151 | 167 |
| x |  |  |  |  |  |  | ***WDR35*** | WD repeat domain 35 | 613602 | 193 |
|  |  |  |  | x |  | x | ***WNK1*** | protein kinase lysine-deficient 1 | 605232 | 169 |
|  |  |  |  | x |  | **x** | ***WNK4*** | protein kinase lysine-deficient 4 | 601844 | 107 |
|  |  |  | x |  |  |  | ***WNT4*** | protein WNT-4 | 603490 | 120 |
|  | x |  |  |  |  |  | ***WT1*** | wilms tumor 1 | 607102 | 127 |
|  |  |  |  |  |  | x | ***XDH*** | xanthine dehydrogenase | 607633 | 131 |
| **x** |  |  |  |  |  |  | ***XPNPEP3*** | X-prolyl aminopeptidase 3 | 613553 | 257 |

**Supplementary Table S1:** Detailed list of covered genes with gene code, associated OMIM number, and mean coverage per gene. Abbreviations: ADTKD, autosomal dominant tubulointerstitial kidney disease; aHUS, atypical hemolytic-uremic syndrome; CAKUT, congenital anomalies of the kidney and urinary tract; TMA, thrombotic microangiopathy.