

## Genetic Conditions and Genes

# 385 genes associated with monogenic disorders linked to kidney disease

Condition Name	Genes	Condition Name	Genes	Condition Name	Genes
17-Alpha-Hydroxylase 17/20-Lyase Deficiency	<i>CYP17A1</i>	Autoinflammation, Antibody Deficiency, and Immune Dysregulation Syndrome	<i>PLCG2</i>	Branchiooculofacial Syndrome	<i>TFAP2A</i>
5-Oxoprolinase Deficiency	<i>OPLAH</i>	Axenfeld-Rieger Syndrome, Type 3	<i>FOXC1</i>	Branchio-Oto-Renal Syndrome, Type 1, 2	<i>SIX1</i> <i>EYA1</i> <i>SIX5</i>
Acroosteolysis, Dominant	<i>NOTCH2</i>	Baraitser-Winter Syndrome, Type 1	<i>ACTB</i>	Burn-McKeown Syndrome	<i>TXNL4A</i>
Acro-Renal-Ocular Syndrome	<i>SALL4</i>	Bardet-Biedl Syndromes, Type 1-12, 14-18, 21	<i>ARL6</i> <i>BBIP1</i> <i>BBS1</i> <i>BBS10</i> <i>BBS12</i> <i>BBS2</i> <i>BBS4</i> <i>BBS5</i> <i>BBS7</i> <i>BBS9</i> <i>C8ORF37</i> <i>CEP290</i> <i>LZTFL1</i> <i>MKKS</i> <i>SDCCAG8</i> <i>TRIM32</i> <i>TTC8</i> <i>WDPCP</i>	C3 Glomerulopathy	<i>C3</i> <i>CFHR5</i> <i>CFI</i> <i>CFH</i> <i>DGKE</i>
Adenine Phosphoribosyltransferase Deficiency	<i>APRT</i>	Barter Syndrome, Type 1, 2, 3/4B, 4a	<i>BSND</i> <i>CLCNKB</i> <i>KCNJ1</i> <i>SLC12A1</i>	Congenital Anomalies of the Kidney and Urinary Tract (CAKUT)	<i>BMP4</i> <i>BMP7</i> <i>CHD1L</i> <i>CRKL</i> <i>GDNF</i> <i>GREM1</i> <i>ROBO2</i>
Alagille Syndrome, Type 1, 2	<i>JAG1</i> <i>NOTCH2</i>	Beckwith-Wiedemann Syndrome	<i>CDKN1C</i> <i>NSD1</i>	Cardiofaciocutaneous Syndrome	<i>KRAS</i>
Alkaptonuria	<i>HGD</i>	Beta-Hemoglobinopathies	<i>HBB</i>	Carnitine Palmitoyltransferase 2 Deficiency	<i>CPT2</i>
Alport Syndrome	<i>COL4A3</i> <i>COL4A4</i> <i>COL4A5</i>	Bifid Nose with or without Anorectal and Renal Anomalies	<i>FREM1</i>	Cataract, Juvenile, with Microcornia and Glucosuria	<i>SLC16A12</i>
Alstrom Syndrome	<i>ALMS1</i>	Birt-Hogg-Dube Syndrome	<i>FLCN</i>	Cenani-Lenz Syndactyly Syndrome	<i>LRP4</i>
Amelogenesis Imperfecta, Type 1G, 2A3	<i>FAM20A</i> <i>WDR72</i>	Bladder Dysfunction, Autonomic, with Impaired Pupillary Reflex and Congenital Anomalies of the Kidney and Urinary Tract (CAKUT)	<i>CHRNA3</i>	Cerebral Creatine Deficiency Syndrome 3	<i>GATM</i>
Amyloidosis	<i>APOA1</i> <i>APOC2</i> <i>B2M</i> <i>GSN</i> <i>LYZ</i> <i>TTR</i>			Pulmonary Venooclusive Disease 1	<i>INF2</i>
Antley-Bixler Syndrome	<i>FGFR2</i>			CHARGE Syndrome	<i>CHD7</i> <i>SEMA3E</i>
Apert Syndrome	<i>FGFR2</i>			CHILD Syndrome	<i>NSDHL</i>
Apparent Mineralocorticoid Excess	<i>HSD11B2</i>			Chondrodysplasia Punctata	<i>EBP</i>
Arthrogryposis, Cleft Palate, Craniosynostosis, and Impaired Intellectual Development	<i>PPP3CA</i>			Ciliopathies, RPGRIP1L-Related	<i>RPGRIP1L</i>
Atypical hemolytic uremic syndrome (aHUS)	<i>CFH</i> <i>CFHR5</i> <i>CFI</i> <i>THBD</i> <i>DGKE</i> <i>C3</i> <i>PLG</i>			COACH Syndrome	<i>TMEM67</i>
				Coenzyme Q10 Deficiency, Primary, Type 1, 2, 3, 6	<i>COQ2</i> <i>COQ6</i> <i>PDSS1</i> <i>PDSS2</i>

Condition Name	Genes	Condition Name	Genes	Condition Name	Genes
Combined Oxidative Phosphorylation Deficiency, Type 11	<i>RMND1</i>	Donnai-Barrow Syndrome	<i>LRP2</i>	Gitelman Syndrome	<i>SLC12A3</i>
Complement Component 5 Deficiency	<i>C5</i>	Duane-Radial Ray Syndrome	<i>SALL4</i>	Glomerulocystic Kidney Disease	<i>HNF1B</i> <i>REN</i> <i>UMOD</i>
Complement Factor H, I Deficiency	<i>CFH</i> <i>CFI</i>	Eagle-Barrett Syndrome	<i>CHRM3</i>	Glomerulopathy with Fibronectin Deposits 2	<i>FN1</i>
Congenital Adrenal Hyperplasia due to 3-Beta-Hydroxysteroid Dehydrogenase Deficiency and 11-Beta-Hydroxylase Deficiency	<i>CYP11B1</i> <i>HSD3B2</i>	Ectrodactyly, Ectodermal Dysplasia, and Cleft Lip/Palate Syndrome 3	<i>TP63</i>	Glucocorticoid Resistance, Generalized	<i>NR3C1</i>
Congenital Adrenal Hypoplasia with Hypogonadotropic Hypogonadism	<i>NROB1</i>	Encephalocraniocutaneous Lipomatosis	<i>FGFR1</i>	Glycogen Storage Disease, Type 1A, 1B/1C, 11	<i>G6PC</i> <i>LDHA</i> <i>SLC37A4</i>
Congenital Anomalies of the Kidney and Urinary Tract Syndrome with or without Hearing Loss, Abnormal Ears, or Developmental Delay (CAKUTHEd)	<i>PBX1</i>	Epilepsy, Progressive Myoclonic, 4 with or without Renal Failure	<i>SCARB2</i>	Golabi-Behmel Syndrome, Type 2	<i>OFD1</i>
Congenital Disorder of Glycosylation, Type 1A, 1H, 1K, 1L	<i>ALG1</i> <i>ALG8</i> <i>ALG9</i> <i>PMM2</i>	Epstein Syndrome	<i>MYH9</i>	Hajdu-Cheney Syndrome	<i>NOTCH2</i>
Congenital Hyperinsulinism	<i>KCNJ11</i>	Fabry Disease	<i>GLA</i>	Hand-Foot-Uterus Syndrome	<i>HOXA13</i>
Cornelia de Lange Syndrome	<i>SMC1A</i>	Familial Cold-Induced Inflammatory Syndrome, Type 1, 3	<i>NLRP3</i> <i>PLCG2</i>	Hartnup Disorder	<i>SLC6A19</i>
Corticosterone Methylxidase Deficiency	<i>CYP11B2</i>	Familial Dysautonomia, Hereditary Sensory and Autonomic Neuropathy Type 3	<i>ELP1</i>	Hereditary Angiopathy with Nephropathy, Aneurysms and Muscle Cramps (HANAC)	<i>COL4A1</i>
Cranioectodermal Dysplasia, Type 1, 3	<i>IFT122</i> <i>IFT43</i> <i>WDR19</i>	Familial Mediterranean Fever	<i>MEFV</i>	Hereditary Renal Amyloidosis	<i>FGA</i>
Currarino Syndrome	<i>MXN1</i>	Fanconi Anemia, Group A, B, C, D2, E, F, G, I, L, M, N, O, P	<i>FANCA</i> <i>FANCB</i> <i>FANCC</i> <i>FANCD2</i> <i>FANCE</i> <i>FANCF</i> <i>FANCG</i> <i>FANCI</i> <i>FANCL</i> <i>FANCM</i> <i>PALB2</i> <i>RAD51C</i> <i>SLX4</i>	Hermansky-Pudlak Syndrome 1	<i>HPS1</i>
CYP11A1 Deficiency Syndrome	<i>CYP11A1</i>	Fanconi Renotubular Syndrome, Type 1, 2, 4	<i>GATM</i> <i>HNF4A</i> <i>SLC34A1</i>	Hyperaldosteronism, Familial, Type 1, 2, 3, 4	<i>CACNA1H</i> <i>CLCN2</i> <i>CYP11B1</i> <i>CYP11B2</i> <i>KCNJ5</i>
Cystinosis	<i>CTNS</i>	Fanconi-Bickel Syndrome	<i>SLC2A2</i>	Hypercalcemia Infantile, Type 1, 2	<i>CYP24A1</i> <i>SLC34A1</i>
Cystinuria	<i>SLC3A1</i> <i>SLC7A9</i>	Fechtner Syndrome	<i>MYH9</i>	Hypercalciuria, Hypophosphatemic Rickets	<i>ADCY10</i> <i>SLC34A3</i>
Dent Disease	<i>CLCN5</i> <i>OCRL</i>	Feingold Syndrome	<i>MYCN</i>	Hyperglycinuria	<i>SLC6A19</i> <i>SLC36A2</i> <i>SLC6A20</i>
Denys-Drash Syndrome	<i>WT1</i>	Floating-Harbor Syndrome	<i>SRCAP</i>	Hyperinsulinemic Hypoglycemia, Diabetes Mellitus	<i>ABCC8</i>
Diabetes Insipidus, Nephrogenic	<i>AQP2</i> <i>AVPR2</i>	Focal Segmental Glomerulosclerosis, Type 2, 4, 5, 6, 7	<i>ACTN4</i> <i>ALG13</i> <i>APOL1</i> <i>CD2AP</i> <i>INF2</i> <i>MYO1E</i> <i>PAX2</i> <i>PMM2</i> <i>SYNPO</i> <i>TRPC6</i>	Hyperparathyroidism 2	<i>CDC73</i>
Diabetes insipidus, Neurohypophyseal	<i>AVP</i> <i>GCK</i> <i>HNF1A</i> <i>PAX4</i>	Fraser Syndrome	<i>FRAS1</i> <i>FREM2</i> <i>GRIP1</i> <i>WT1</i>	Hyperphenylalaninemia, BH4-Deficient	<i>PCBD1</i>
Diabetes Mellitus, Juvenile-Onset	<i>PCBD1</i>	Galloway-Mowat Syndrome	<i>TP53RK</i> <i>WDR73</i>	Hyperphosphatemic Familial Tumoral Calcinosis	<i>GALNT3</i>
Diabetes Mellitus, Neonatal, with Congenital Hypothyroidism	<i>GLIS3</i>	Genitopatellar Syndrome	<i>KAT6B</i>	Hyperphosphatemic Tumoral Calcinosis	<i>KL</i>
Diabetes Mellitus, Noninsulin-Dependent	<i>SLC2A2</i>	Gilllessen Kaesbach Nishimura Syndrome (GIKANIS)	<i>ALG9</i>	Hyperprolinemia, Type 1	<i>PRODH</i>
Diamond-Blackfan Anemia, Type 1, 3-11	<i>RPL11</i> <i>RPL26</i> <i>RPL35A</i> <i>RPL5</i> <i>RPS10</i> <i>RPS17</i> <i>RPS19</i> <i>RPS24</i> <i>RPS26</i> <i>RPS7</i>			Hyperuricemic Nephropathy	<i>REN</i> <i>SARS2</i> <i>UMOD</i>

Condition Name	Genes	Condition Name	Genes	Condition Name	Genes
Hypomagnesemia Type 1-6	<i>CLDN16</i> <i>CLDN19</i> <i>CNNM2</i> <i>CNNM2</i> <i>EGF</i> <i>FXYD</i> <i>KCNA1</i> <i>TRPM6</i>	LMNA-Related Disorders	<i>LMNA</i>	Nephrolithiasis/Osteoporosis, Hypophosphatemic 1 and 2	<i>SLC34A1</i> <i>SLC9A3R1</i>
Hypoparathyroidism, Familial Isolated	<i>GCM2</i>	Lowe Syndrome	<i>OCRL</i>	Nephronophthisis 1–4, 7, 9, 11–13, 15, 16, 19	<i>ANKS6</i> <i>CEP164</i> <i>DCDC2</i> <i>GLIS2</i> <i>INVS</i> <i>NEK8</i> <i>NPHP1</i> <i>NPHP3</i> <i>NPHP4</i> <i>SLC41A1</i> <i>TMEM67</i> <i>TTC21B</i> <i>WDR19</i> <i>XPNPEP3</i>
Hypoparathyroidism, Sensorineural Deafness, and Renal Dysplasia	<i>GATA3</i>	LRP5-Related Disorders	<i>LRP5</i>	Nephropathy due to CFHR5 Deficiency	<i>CFHR5</i>
Hypophosphatasia	<i>ALPL</i>	Lymphedema-Distichiasis Syndrome with Renal Disease and Diabetes Mellitus	<i>FOXC2</i>	Nephropathy with Pretibial Epidermolysis Bullosa and Deafness	<i>CD151</i>
Hypophosphatemic Rickets	<i>CLCN5</i> <i>DMP1</i> <i>ENPP1</i> <i>FGF23</i> <i>PHEX</i> <i>VDR</i>	Lysinuric Protein Intolerance	<i>SLC7A7</i>	Nephrotic Syndrome	<i>DLC1</i> <i>ITSN2</i> <i>KANK1</i> <i>TNS2</i>
Hypotrichosis-Lymphedema-Telangiectasia-Renal Defect Syndrome	<i>SOX18</i>	Mandibulfacial Dysostosis with Alopecia	<i>EDNRA</i>	Nephrotic Syndrome Type 2-7, 15, Steroid sensitive, Congenital	<i>DGKE</i> <i>LAMB2</i> <i>MAGI2</i> <i>NPHS1</i> <i>NPHS2</i> <i>PLCE1</i> <i>PLCG2</i> <i>PTPRO</i> <i>WT1</i>
Hypouricemia, Renal, Type 1, 2	<i>SLC22A12</i> <i>SLC2A9</i>	Maturity Onset Diabetes of the Young (MODY), Type 2-4, 6-9, 11	<i>BLK</i> <i>CEL</i> <i>GCK</i> <i>HNF1A</i> <i>KLF11</i> <i>NEUROD1</i> <i>PAX4</i> <i>PDX1</i>	Neurofibromatosis, Type 1	<i>NF1</i>
IMAGE Syndrome	<i>CDKN1C</i>	Meckel Syndrome, Type 3,4,7	<i>CEP290</i> <i>NPHP3</i> <i>TMEM67</i>	Noonan Syndrome	<i>BRAF</i> <i>PTPN11</i>
Interstitial Lung Disease with Nephrotic Syndrome and Epidermolysis Bullosa	<i>ITGA3</i>	Medullary Cystic Kidney Disease	<i>UMOD</i>	Norum Disease	<i>LCAT</i>
Interstitial Nephritis, Karyomegalic	<i>FAN1</i>	Megaloblastic Anemia 1	<i>CUBN</i> <i>AMN</i>	Obesity	<i>MC4R</i> <i>UCP3</i>
IPEX Syndrome	<i>FOXP3</i>	Metaphyseal Chondrodysplasia, Murk Jansen Type	<i>PTH1R</i>	Ochoa Syndrome	<i>HPSE2</i>
Isolated Renal Hypoplasia	<i>PAX2</i>	Methylmalonic Acidemia, Type mut0	<i>MUT</i>	Orofaciodigital Syndrome 6, I	<i>CPLANE1</i> <i>OFD1</i>
IVIC Syndrome	<i>SALL4</i>	Methylmalonic Aciduria and Homocystinuria, Type cblC	<i>MMACHC</i>	Pallister-Hall Syndrome	<i>GLI3</i>
Joubert Syndrome Type 3, 4, 5, 6, 10 with Oculoreneal Defect	<i>AHI1</i> <i>CEP290</i> <i>NPHP1</i> <i>OFD1</i> <i>TMEM67</i>	Mevalonic Aciduria	<i>MVK</i>	Papillorenal Syndrome	<i>PAX2</i>
Junctional Epidermolysis Bullosa-Pyloric Atresia Syndrome	<i>ITGA6</i> <i>ITGB4</i>	Microphthalmia, syndromic 6	<i>BMP4</i>	Permanent Neonatal Diabetes Mellitus	<i>INS</i> <i>KCNJ11</i>
Kallmann Syndrome	<i>ANOS1</i> <i>FGFR1</i> <i>PROKR2</i>	Mitochondrial Complex 3 Deficiency	<i>BCS1L</i> <i>UQC2</i>	Pfeiffer Syndrome Type 3	<i>FGFR2</i>
Kelley-Seegmiller Syndrome	<i>HPRT1</i>	Mitochondrial Complex 4 Deficiency	<i>APOPT1</i> <i>(COA8)</i> <i>COX10</i> <i>COX14</i> <i>COX20</i> <i>COX6B1</i> <i>COX8A</i> <i>FASTKD2</i> <i>PET100</i> <i>SCO1</i> <i>TACO1</i>	Phosphoglycerate Kinase 1 Deficiency	<i>PGK1</i>
Koolen-De Vries Syndrome	<i>KANSL1</i>	Mitochondrial DNA Depletion Syndrome 8A	<i>RRM2B</i>	Phosphoribosylpyrophosphate Synthetase Superactivity	<i>PRPS1</i>
LADD Syndrome	<i>FGF10</i> <i>FGFR2</i>	Muckle-Wells Syndrome	<i>NLRP3</i>	Pierson Syndrome	<i>LAMB2</i>
Lesch-Nyhan Syndrome	<i>HPRT1</i>	Mullerian Aplasia and Hyperandrogenism	<i>WNT4</i>	Plasminogen Deficiency, Type 1	<i>PLG</i>
Liddle Syndrome, Type 1, 2	<i>SCNN1B</i> <i>SCNN1G</i>	Multicentric Carpotarsal Osteolysis with or without Nephropathy	<i>MAFB</i>	Polycystic Kidney and/or Polycystic Liver Disease	<i>ALG9</i> <i>GANAB</i>
Lipodystrophy Congenital Generalized, Type 1, 2, 3	<i>AGPAT2</i> <i>BSCL2</i> <i>CAV1</i>	Myoglobinuria, Acute Recurrent	<i>LPIN1</i>		
Lipodystrophy, Familial Partial, Type 7	<i>CAV1</i>	Nail-Patella Syndrome	<i>LMX1B</i>		
Lipoid Adrenal Hyperplasia	<i>STAR</i>	Nephrolithiasis	<i>CLCN5</i> <i>FGF23</i> <i>SLC26A1</i>		
Lipoprotein Glomerulopathy	<i>APOE</i>				

Condition Name	Genes
Polycystic Kidney Disease (PKD), 1 and 2, Autosomal Dominant	<i>PKD1</i> <i>PKD2</i>
Polycystic Kidney Disease, Autosomal Recessive	<i>PKHD1</i>
Polycystic Liver Disease (PLD), 1–3	<i>ALG8</i> <i>PRKCSH</i> <i>SEC63</i>
Primary Hyperoxaluria Type 1, 2, 3	<i>AGXT</i> <i>GRHPR</i> <i>HOGA1</i>
Prune Belly Syndrome	<i>CHRM3</i>
Pseudohypoaldosteronism Type I, Autosomal Dominant Hypertension, Early-Onset	<i>NR3C2</i>
Pseudohypoaldosteronism, Type 1, 1B, 2B, 2C, 2D, 2E	<i>CUL3</i> <i>KLHL3</i> <i>SCNN1A</i> <i>SCNN1B</i> <i>SCNN1G</i> <i>WNK1</i> <i>WNK4</i>
Pseudohypoparathyroidism Type 1B	<i>GNAS</i> <i>STX16</i>
Pseudoxanthoma Elasticum Arterial Calcification, Generalized, of Infancy, 2	<i>ABCC6</i>
Pulmonary Hypertension, Familial Primary with or without Hereditary Hemorrhagic Telangiectasia	<i>BMPR2</i>
Pulmonary Hypertension, Primary 2, 3, 4	<i>CAV1</i> <i>KCNK3</i> <i>SMAD9</i>
Pulmonary venoocclusive disease 1	<i>BMPR2</i>
Renal Agenesis	<i>RET</i>
Renal Cysts and Diabetes Syndrome	<i>HNF1B</i>
Renal Dysplasia, Cystic	<i>BICC1</i>
Renal Glucosuria	<i>SLC5A1</i> <i>SLC5A2</i>
Renal Hypertension	<i>SLC12A2</i>
Renal Hypodysplasia	<i>SIX2</i> <i>UPK3A</i>

Condition Name	Genes
Renal Tubular Acidosis	<i>ATP6V0A4</i> <i>ATP6V1B1</i> <i>CA2</i> <i>FOX11</i> <i>SLC4A1</i> <i>SLC4A4</i> <i>WDR72</i>
Renal Tubular Disease	<i>NEDD4L</i>
Renal Tubular Dysgenesis	<i>ACE</i> <i>AGT</i> <i>AGTR1</i> <i>REN</i>
Renal-Hepatic-Pancreatic Dysplasia 2	<i>NEK8</i>
Rickets due to Defect in Vitamin D 25-hydroxylation	<i>CYP2R1</i>
Robinow Syndrome	<i>ROR2</i> <i>WNT5A</i>
Rubinstein-Taybi Syndrome, Type 1	<i>CREBBP</i>
Scalp-Ear-Nipple Syndrome	<i>KCTD1</i>
Schimke Immunoosseous Dysplasia	<i>SMARCAL1</i>
Seizures, Sensorineural Deafness, Ataxia, Mental Retardation, and SeSAME Syndrome	<i>KCNJ10</i>
Senior-Loken Syndrome, Type 4, 5, 6, 7	<i>CEP290</i> <i>INVS</i> <i>IQCB1</i> <i>NPHP1</i> <i>NPHP3</i> <i>NPHP4</i> <i>SDCCAG8</i> <i>WDR19</i>
SERKAL Syndrome	<i>WNT4</i>
Short Stature, Microcephaly, and Endocrine Dysfunction	<i>XRCC4</i>
Short-Rib Thoracic Dysplasia 5, 9, 10	<i>IFT140</i> <i>IFT172</i> <i>WDR19</i>
Simpson-Golabi-Behmel Syndrome, Type 1	<i>GPC3</i>
Smith-Lemli-Opitz Syndrome	<i>DHCR7</i>
Sneddon Syndrome	<i>ADA2</i>

Condition Name	Genes
Sotos Syndrome 1	<i>NSD1</i>
Steroid-Resistant Nephrotic Syndrome	<i>ALG13</i> <i>SYNPO</i>
Steroid-Resistant Nephrotic Syndrome with Focal Segmental Hyalinosis	<i>ARHGAP24</i>
Sucrase-Isomaltase Deficiency	<i>SI</i>
Susceptibility to End-Stage Renal Disease	<i>APOL1</i>
Susceptibility to Gout	<i>ABCG2</i>
Susceptibility to Hypertension	<i>STK39</i>
Systemic Lupus Erythematosus 16	<i>DNASE1L3</i>
Thrombophilia due to Thrombomodulin Defect	<i>THBD</i>
Thrombotic Thrombocytopenic Purpura, Familial	<i>ADAMTS13</i>
Townes-Brocks Syndrome 1	<i>SALL1</i>
Tuberous Sclerosis 1, 2	<i>TSC1</i> <i>TSC2</i>
Tubulointerstitial Kidney Disease, Autosomal Dominant	<i>HNF1B</i> <i>REN</i> <i>UMOD</i>
Tumoral Calcinosis, Hyperphosphatemic	<i>FGF23</i>
Thyrotoxic periodic paralysis, susceptibility to, Type 2	<i>KCNJ18</i>
Type 1 Diabetes	<i>FOXP3</i> <i>INS</i>
Urofacial Syndrome 1	<i>HPSE2</i>
VACTERL association with hydrocephalus	<i>HOXD13</i>
Vasculitis, Autoinflammation, Immunodeficiency, and Hematologic Defects Syndrome	<i>ADA2</i>
Vesicoureteral Reflux 3	<i>SOX17</i>
Vitamin D-Dependent Rickets, Type 1A	<i>CYP27B1</i>
Von Hippel-Lindau Syndrome	<i>VHL</i>
Wilson Disease	<i>ATP7B</i>
Wiskott-Aldrich Syndrome	<i>WAS</i>
Wolcott-Rallison Syndrome	<i>EIF2AK3</i>
Wolfram Syndrome Type 1, 2	<i>CISD2</i> <i>WFS1</i>
Xanthinuria, Type 1, 2	<i>MOCOS</i> <i>XDH</i>