

**nucSEEK® Comprehensive Sequence Analysis of Nuclear Mitochondrial Exome**  
**Addendum B: alphabetical gene list**

<b>Gene</b>	<b>Functional Category</b>
AAAS	Cell Function
AADAT	Amino Acid Metabolism
AARS2	tRNA
AASS	Amino Acid Metabolism
ABAT	Neurotransmitters
ABCA9	ABC Transporters
ABCB10	ABC Transporters
ABCB6	ABC Transporters
ABCB7	ABC Transporters
ABCB8	ABC Transporters
ABCC12	ABC Transporters
ABCC8	ABC Transporters
ABCC9	ABC Transporters
ABCD1	ABC Transporters
ABCD2	ABC Transporters
ABCD3	ABC Transporters
ABCF2	ABC Transporters
ABHD10	Other Enzymes
ABHD11	Other Enzymes
ACAA1	Lipid Metabolism
ACAA2	Lipid Metabolism
ACACA	Lipid Metabolism
ACACB	Lipid Metabolism
ACAD10	Lipid Metabolism
ACAD11	Lipid Metabolism
ACAD8	Lipid Metabolism
ACAD9	Lipid Metabolism
ACADL	Lipid Metabolism
ACADM	Lipid Metabolism
ACADS	Lipid Metabolism
ACADSB	Lipid Metabolism
ACADVL	Lipid Metabolism
ACAT1	Lipid Metabolism
ACAT2	Lipid Metabolism
ACHE	Neurotransmitters
ACLY	Other Enzymes
ACN9	Other
ACO1	Iron Metabolism
ACO2	TCA Cycle
ACOT13	Cell Function
ACOT2	Cell Function
ACOT7	Cell Function
ACOT9	Cell Function
ACOX3	Lipid Metabolism
ACP6	Lipid Metabolism
ACSF2	Lipid Metabolism
ACSF3	Lipid Metabolism
ACSL1	Lipid Metabolism
ACSL4	Lipid Metabolism

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<b>Gene</b>	<b>Functional Category</b>
ACSL5	Lipid Metabolism
ACSL6	Lipid Metabolism
ACSM1	Lipid Metabolism
ACSM2A	Lipid Metabolism
ACSM3	Lipid Metabolism
ACSM4	Lipid Metabolism
ACSM5	Lipid Metabolism
ACSS1	Lipid Metabolism
ACYP2	Other
ADCK1	Other
ADCK2	Other
ADCK4	Other
ADCK5	Other
ADHFE1	Other Enzymes
ADO	Amino Acid Metabolism
ADSL	Nucleotide Metabolism
AFG3L2	Other
AGK	Lipid Metabolism
AGMAT	Other Enzymes
AGPAT5	Lipid Metabolism
AGPS	Lipid Metabolism
AGR2	Other
AGXT	Other Enzymes
AGXT2	Other Enzymes
AGXT2L2	Other Enzymes
AHCY	Other Enzymes
AIFM1	Complex I
AIFM2	Complex I
AIFM3	Complex I
AK2	Cell Function
AK3	Cell Function
AKAP1	Cell Function
AKAP10	Cell Function
AKAP4	Cell Function
AKR1B15	Other Enzymes
AKR7A2	Neurotransmitters
AKT1	Other Enzymes
AKT2	Other Enzymes
ALAS1	Iron Metabolism
ALAS2	Iron Metabolism
ALDH18A1	Other Enzymes
ALDH1B1	Other Enzymes
ALDH1L1	Other Enzymes
ALDH1L2	Other Enzymes
ALDH2	Other Enzymes
ALDH3A2	Other Enzymes
ALDH4A1	Other Enzymes
ALDH5A1	Other Enzymes
ALDH6A1	Other Enzymes

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<b>Gene</b>	<b>Functional Category</b>
ALDH7A1	Other Enzymes
ALDH9A1	Other Enzymes
ALKBH7	Other
AMACR	Other Enzymes
AMT	Amino Acid Metabolism
ANK2	Cell Function
ANKRD26	Cell Function
APEX2	DNA/RNA
APOA1BP	Lipid Metabolism
APOOL	Lipid Metabolism
APOPT1	Other
APTX	DNA/RNA
ARG2	Amino Acid Metabolism
ARMC1	Other
ARMC10	Cell Function
ARMC4	Other
ARMS2	Other
ARSA	Carbohydrate Metabolism
AS3MT	Other
ASAH2	Cell Function
ASS1	Amino Acid Metabolism
ATAD1	Cell Function
ATAD3A	Cell Function
ATAD3B	Cell Function
ATIC	Nucleotide Metabolism
ATP10D	Complex V
ATP5A1	Complex V
ATP5B	Complex V
ATP5C1	Complex V
ATP5D	Complex V
ATP5E	Complex V
ATP5F1	Complex V
ATP5G1	Complex V
ATP5G2	Complex V
ATP5G3	Complex V
ATP5H	Complex V
ATP5I	Complex V
ATP5J	Complex V
ATP5J2	Complex V
ATP5L	Complex V
ATP5O	Complex V
ATP5S	Complex V
ATP5SL	Complex V
ATP7B	Ion Channel
ATP8B1	Lipid Metabolism
ATPAF1	Complex V
ATPAF2	Complex V
ATPIF1	Complex V
ATXN7	Cell Function

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<b>Gene</b>	<b>Functional Category</b>
AUH	Cell Function
AURKAIP1	Other
BAD	Cell Function
BAK1	Cell Function
BAX	Cell Function
BBOX1	Lipid Metabolism
BCAT1	Amino Acid Metabolism
BCAT2	Amino Acid Metabolism
BCKDHA	Amino Acid Metabolism
BCKDHB	Amino Acid Metabolism
BCKDK	Amino Acid Metabolism
BCL2	Cell Function
BCL2L13	Other
BCS1L	Complex III
BDH1	Other Enzymes
BHMT	Other Enzymes
BID	Cell Function
BLOC1S1	Cell Function
BOLA1	Other
BOLA3	Iron Metabolism
BPHL	Other Enzymes
BTD	Other Enzymes
C10orf10	Other
C10orf2	DNA/RNA
C12orf65	Protein Metabolism
C14orf159	Other
C14orf2	Other
C15orf48	Other
C17orf89	Other
C19orf70	Other
C1QBP	Other
C20orf24	Cell Function
C21orf33	Other
C2orf47	Complex I
C6orf136	Other
C6orf203	Other
C6orf57	Other
C7orf10	Other
C7orf55	Other
CA5A	Carbohydrate Metabolism
CA5B	Carbohydrate Metabolism
CABC1	Other
CACNA1A	Ion Channel
CACNA1S	Ion Channel
CACNA2D1	Ion Channel
CARKD	Other Enzymes
CARS2	tRNA
CASP8	Cell Function
CBR4	Other Enzymes

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<b>Gene</b>	<b>Functional Category</b>
CBS	Other Enzymes
CCBL2	Amino Acid Metabolism
CCDC136	Other
CCDC51	Other
CCDC58	Other
CCDC90A	Other
CCDC90B	Other
CCT7	Protein Metabolism
CDC42BPA	Cell Function
CDC42BPB	Other Enzymes
CDC42BPG	Other
CDKL5	Other Enzymes
CECR5	Other
CERK	Cell Function
CFTR	ABC Transporters
CHAT	Neurotransmitters
CHCHD1	Other
CHCHD10	Other
CHCHD2	Other
CHCHD3	Other
CHCHD4	Other
CHCHD7	Other
CHDH	Lipid Metabolism
CHRNA4	Neurotransmitters
CHRNA2	Neurotransmitters
CISD1	Iron Metabolism
CISD2	Iron Metabolism
CKB	Cell Function
CKM	Cell Function
CKMT1A	Cell Function
CKMT1B	Cell Function
CKMT2	Other
CLCN1	Ion Channel
CLCN2	Ion Channel
CLCN5	Ion Channel
CLCN7	Ion Channel
CLCNKB	Ion Channel
CLIC4	Ion Channel
CLN3	Cell Function
CLN5	Cell Function
CLN6	Cell Function
CLN8	Cell Function
CLPB	Other Enzymes
CLPP	Protein Metabolism
CLPX	Other Enzymes
CLYBL	Other Enzymes
CMC1	Complex IV
CNR1	GTPase
COA5	Complex IV

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<b>Gene</b>	<b>Functional Category</b>
COA6	Complex IV
COMT	Neurotransmitters
COMTD1	Neurotransmitters
COQ10A	Coenzyme Q
COQ10B	Coenzyme Q
COQ2	Coenzyme Q
COQ3	Coenzyme Q
COQ4	Coenzyme Q
COQ5	Coenzyme Q
COQ6	Coenzyme Q
COQ7	Coenzyme Q
COQ9	Coenzyme Q
COX10	Complex IV
COX11	Complex IV
COX14	Complex IV
COX15	Complex IV
COX16	Complex IV
COX17	Complex IV
COX18	Complex IV
COX19	Complex IV
COX41	Complex IV
COX42	Complex IV
COX5A	Complex IV
COX5B	Complex IV
COX6A1	Complex IV
COX6A2	Complex IV
COX6B1	Complex IV
COX6B2	Complex IV
COX6C	Complex IV
COX7A1	Complex IV
COX7A2	Complex IV
COX7A2L	Complex IV
COX7B	Complex IV
COX7B2	Complex IV
COX7C	Complex IV
COX8A	Complex IV
COX8C	Complex IV
CPOX	Iron Metabolism
CPS1	Other Enzymes
CPT1A	Lipid Metabolism
CPT1B	Lipid Metabolism
CPT1C	Lipid Metabolism
CPT2	Lipid Metabolism
CRAT	Lipid Metabolism
CRLS1	Other Enzymes
CROT	Lipid Metabolism
CRY1	Cell Function
CS	TCA Cycle
CTPS2	Nucleotide Metabolism

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<b>Gene</b>	<b>Functional Category</b>
CTSD	Other Enzymes
CTU1	Other Enzymes
CYB5A	Lipid Metabolism
CYB5B	Lipid Metabolism
CYB5R1	Lipid Metabolism
CYB5R2	Lipid Metabolism
CYB5R3	Lipid Metabolism
CYBA	Lipid Metabolism
CYBB	Lipid Metabolism
CYC1	Lipid Metabolism
CYCS	Lipid Metabolism
CYP11A1	Lipid Metabolism
CYP11B1	Lipid Metabolism
CYP11B2	Lipid Metabolism
CYP24A1	Lipid Metabolism
CYP27A1	Lipid Metabolism
CYP27B1	Lipid Metabolism
D2HGDH	Other Enzymes
DACT2	Other
DAP3	Cell Function
DARS2	tRNA
DBT	Amino Acid Metabolism
DCAF5	Other
DCAKD	Other Enzymes
DDAH1	Other Enzymes
DDC	Neurotransmitters
DDX28	Other Enzymes
DECR1	Lipid Metabolism
DGUOK	Nucleotide Metabolism
DHODH	Nucleotide Metabolism
DHRS1	Other Enzymes
DHRS4	Other Enzymes
DHTKD1	Other Enzymes
DHX29	Other
DIABLO	Cell Function
DISC1	Cell Function
DLAT	Pyruvate Dehydrogenase
DLD	Amino Acid Metabolism
DLST	TCA Cycle
DMGDH	Lipid Metabolism
DMPK	Other Enzymes
DNAJA3	Protein Metabolism
DNAJC11	Protein Metabolism
DNAJC15	Protein Metabolism
DNAJC19	Protein Metabolism
DNAJC27	Protein Metabolism
DNAJC30	Protein Metabolism
DNAJC4	Protein Metabolism
DNAJC5	Protein Metabolism

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<b>Gene</b>	<b>Functional Category</b>
DNM1L	Cell Function
DPYD	Nucleotide Metabolism
DRG2	Cell Function
DTNBP1	Cell Function
DUS2L	tRNA
DUSP16	Other Enzymes
DUSP26	Other Enzymes
DUT	Nucleotide Metabolism
E2F1	Cell Function
EARS2	tRNA
ECH1	Lipid Metabolism
ECHDC3	Lipid Metabolism
ECHS1	Lipid Metabolism
ECI1	Lipid Metabolism
ECI2	Lipid Metabolism
ECSIT	Other
EEFSEC	Other
EFHA1	Other
EFHD1	Other
EHHADH	Lipid Metabolism
ELAC2	tRNA
ELN	Cell Function
EMC2	Membrane Protein
ENDOG	DNA/RNA
ENO1	Carbohydrate Metabolism
ENO3	Carbohydrate Metabolism
ETFA	Lipid Metabolism
ETFB	Lipid Metabolism
ETFDH	Lipid Metabolism
ETHE1	Amino Acid Metabolism
EXOG	DNA/RNA
FAAH	Lipid Metabolism
FAHD1	Other
FAHD2A	Other
FAM136A	Other
FAM162A	Other
FAM210A	Other
FAM213A	Other
FAM36A	Other
FAM65C	Other
FAM82A1	Other
FAM82A2	Other
FAM82B	Other
FARS2	tRNA
FASN	Lipid Metabolism
FASTK	Other Enzymes
FASTKD2	Cell Function
FBP1	Carbohydrate Metabolism
FBXL4	Other Enzymes



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<b>Gene</b>	<b>Functional Category</b>
FDPS	Lipid Metabolism
FDX1	Iron Metabolism
FDX1L	Other
FDXR	Lipid Metabolism
FECH	Iron Metabolism
FH	TCA Cycle
FIS1	Cell Function
FITM2	Lipid Metabolism
FKBP8	Protein Metabolism
FOLR1	Cell Function
FOXC1	Other
FOXG1	Other
FOXRED1	Complex I
FPGS	Other Enzymes
FRMD3	Membrane Protein
FTH1	Iron Metabolism
FTMT	Iron Metabolism
FTSJ2	DNA/RNA
FUNDC2	Other
FXC1	Membrane Protein
FXN	Iron Metabolism
G6PC	Carbohydrate Metabolism
G6PD	Carbohydrate Metabolism
GAD1	Carbohydrate Metabolism
GAD2	Carbohydrate Metabolism
GADD45GIP1	Cell Function
GALC	Carbohydrate Metabolism
GARS	tRNA
GATC	tRNA
GATM	Lipid Metabolism
GBAS	Other
GCAT	Amino Acid Metabolism
GCDH	Amino Acid Metabolism
GCK	Carbohydrate Metabolism
GCSH	Amino Acid Metabolism
GDAP1	Cell Function
GFER	Cell Function
GFM1	Protein Metabolism
GFM2	Protein Metabolism
GHITM	Membrane Protein
GIMAP5	Nucleotide Metabolism
GK	Carbohydrate Metabolism
GK2	Carbohydrate Metabolism
GLA	Carbohydrate Metabolism
GLDC	Amino Acid Metabolism
GLO1	Other Enzymes
GLOD4	Other Enzymes
GLRA1	Neurotransmitters
GLRX	Antioxidant

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<b>Gene</b>	<b>Functional Category</b>
GLRX2	Antioxidant
GLRX5	Antioxidant
GLS	Amino Acid Metabolism
GLS2	Amino Acid Metabolism
GLUD1	Amino Acid Metabolism
GLYAT	Other Enzymes
GLYCTK	Amino Acid Metabolism
GMPPB	Carbohydrate Metabolism
GNAS	Other
GNG5	GTPase
GNPAT	Lipid Metabolism
GOT2	TCA Cycle
GPAM	Lipid Metabolism
GPD1	Carbohydrate Metabolism
GPD2	Carbohydrate Metabolism
GPI	Carbohydrate Metabolism
GPT2	Amino Acid Metabolism
GPX1	Antioxidant
GPX4	Other
GRPEL1	Other
GRPEL2	Other
GRSF1	Other
GSR	Antioxidant
GSTK1	Antioxidant
GTPBP10	GTPase
GTPBP3	GTPase
GTPBP5	GTPase
GTPBP8	GTPase
GUF1	Other Enzymes
GYS1	Carbohydrate Metabolism
GYS2	Carbohydrate Metabolism
H6PD	Carbohydrate Metabolism
HADH	Lipid Metabolism
HADHA	Lipid Metabolism
HADHB	Lipid Metabolism
HAGH	Lipid Metabolism
HAO2	Lipid Metabolism
HARS	tRNA
HARS2	tRNA
HBXIP	Other
HCCS	Iron Metabolism
HDDC2	Other
HEMK1	Other
HIBADH	Amino Acid Metabolism
HIBCH	Lipid Metabolism
HIGD1A	Other
HIGD2A	Other
HINT2	Nucleotide Metabolism
HK1	Carbohydrate Metabolism

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<b>Gene</b>	<b>Functional Category</b>
HK2	Carbohydrate Metabolism
HK3	Carbohydrate Metabolism
HLCS	Carbohydrate Metabolism
HMGCL	Amino Acid Metabolism
HMGCS2	Lipid Metabolism
HOGA1	Amino Acid Metabolism
HPDL	Other Enzymes
HRSP12	Other
HSCB	Iron Metabolism
HSD17B10	Lipid Metabolism
HSD17B4	Lipid Metabolism
HSD17B8	Lipid Metabolism
HSD3B1	Lipid Metabolism
HSD3B2	Lipid Metabolism
HSDL1	Lipid Metabolism
HSDL2	Lipid Metabolism
HSPA9	Cell Function
HSPB7	Cell Function
HSPD1	Cell Function
HSPE1	Cell Function
HTRA2	Cell Function
IARS2	tRNA
IBA57	Iron Metabolism
ICT1	Other
IDE	Other
IDH1	TCA Cycle
IDH2	TCA Cycle
IDH3A	TCA Cycle
IDH3B	TCA Cycle
IDH3G	TCA Cycle
IDI1	Lipid Metabolism
IMMP2L	Cell Function
IMMT	Cell Function
INSR	Other
IQCE	Other
IREB2	Iron Metabolism
ISCA1	Iron Metabolism
ISCA2	Iron Metabolism
ISCU	Iron Metabolism
ISOC2	Other Enzymes
IVD	Amino Acid Metabolism
KARS	tRNA
KCNA1	Ion Channel
KCNE1	Ion Channel
KCNE2	Ion Channel
KCNH2	Ion Channel
KCNJ11	Ion Channel
KCNJ2	Ion Channel
KCNQ1	Ion Channel

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<b>Gene</b>	<b>Functional Category</b>
KCNQ2	Ion Channel
KCNQ3	Ion Channel
KIAA0141	Other
KIF1B	Other
KRT5	Cell Function
KYNU	Amino Acid Metabolism
L2HGDH	Amino Acid Metabolism
LACE1	Other Enzymes
LACTB	Other Enzymes
LACTB2	Other Enzymes
LAP3	Amino Acid Metabolism
LARS	tRNA
LARS2	tRNA
LDHA	Carbohydrate Metabolism
LDHAL6B	Carbohydrate Metabolism
LDHB	Carbohydrate Metabolism
LDHD	Carbohydrate Metabolism
LETM1	Cell Function
LETMD1	Cell Function
LIAS	Lipid Metabolism
LIPT1	Lipid Metabolism
LIPT2	Lipid Metabolism
LONP1	Other Enzymes
LRPPRC	Cell Function
LRRK2	Other Enzymes
LYRM1	Other
LYRM2	Other
LYRM4	Other
LYRM5	Other
LYRM7	Other
MAOA	Neurotransmitters
MAOB	Neurotransmitters
MARC1	Other
MARC2	Other
MARS	tRNA
MARS2	tRNA
MAT2B	Amino Acid Metabolism
MAVS	Cell Function
MCAT	Lipid Metabolism
MCCC1	Lipid Metabolism
MCCC2	Lipid Metabolism
MCEE	Lipid Metabolism
MCU	Ion Channel
MDH1	TCA Cycle
MDH2	TCA Cycle
ME1	Lipid Metabolism
ME2	TCA Cycle
ME3	TCA Cycle
MECP2	Other

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<b>Gene</b>	<b>Functional Category</b>
MECR	Other
MED23	DNA/RNA
MEN1	Cell Function
METAP1D	Amino Acid Metabolism
METTL17	Cell Function
MFN1	Cell Function
MFN2	Cell Function
MFSD8	Membrane Protein
MGLL	Lipid Metabolism
MGME1	DNA/RNA
MGST3	Cell Function
MICU1	Other
MINOS1	Other
MIPEP	Other Enzymes
MLYCD	Lipid Metabolism
MMAA	Lipid Metabolism
MMAB	Lipid Metabolism
MMACHC	Lipid Metabolism
MMADHC	Lipid Metabolism
MNF1	Other
MOBP	Other
MOCOS	Other
MOCS1	Other
MOCS2	Other
MOCS3	Other
MOGS	Carbohydrate Metabolism
MPC1	Cell Function
MPC2	Cell Function
MPST	Amino Acid Metabolism
MPV17	Antioxidant
MPV17L	Membrane Protein
MPV17L2	Membrane Protein
MRM1	Other
MRP63	Ribosome Protein
MRPL1	Ribosome Protein
MRPL10	Ribosome Protein
MRPL11	Ribosome Protein
MRPL12	Ribosome Protein
MRPL13	Ribosome Protein
MRPL14	Ribosome Protein
MRPL15	Ribosome Protein
MRPL16	Ribosome Protein
MRPL17	Ribosome Protein
MRPL18	Ribosome Protein
MRPL19	Ribosome Protein
MRPL2	Ribosome Protein
MRPL20	Ribosome Protein
MRPL21	Ribosome Protein
MRPL22	Ribosome Protein

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<b>Gene</b>	<b>Functional Category</b>
MRPL23	Ribosome Protein
MRPL24	Ribosome Protein
MRPL27	Ribosome Protein
MRPL28	Ribosome Protein
MRPL3	Ribosome Protein
MRPL30	Ribosome Protein
MRPL32	Ribosome Protein
MRPL33	Ribosome Protein
MRPL34	Ribosome Protein
MRPL35	Ribosome Protein
MRPL36	Ribosome Protein
MRPL37	Ribosome Protein
MRPL38	Ribosome Protein
MRPL39	Ribosome Protein
MRPL4	Ribosome Protein
MRPL40	Ribosome Protein
MRPL41	Ribosome Protein
MRPL42	Ribosome Protein
MRPL43	Ribosome Protein
MRPL44	Ribosome Protein
MRPL45	Ribosome Protein
MRPL46	Ribosome Protein
MRPL47	Ribosome Protein
MRPL48	Ribosome Protein
MRPL49	Ribosome Protein
MRPL50	Ribosome Protein
MRPL51	Ribosome Protein
MRPL52	Ribosome Protein
MRPL53	Ribosome Protein
MRPL54	Ribosome Protein
MRPL55	Ribosome Protein
MRPL9	Ribosome Protein
MRPS10	Ribosome Protein
MRPS11	Ribosome Protein
MRPS12	Ribosome Protein
MRPS14	Ribosome Protein
MRPS15	Ribosome Protein
MRPS16	Ribosome Protein
MRPS17	Ribosome Protein
MRPS18A	Ribosome Protein
MRPS18B	Ribosome Protein
MRPS18C	Ribosome Protein
MRPS2	Ribosome Protein
MRPS21	Ribosome Protein
MRPS22	Ribosome Protein
MRPS23	Ribosome Protein
MRPS24	Ribosome Protein
MRPS25	Ribosome Protein
MRPS26	Ribosome Protein

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<b>Gene</b>	<b>Functional Category</b>
MRPS27	Ribosome Protein
MRPS28	Ribosome Protein
MRPS30	Ribosome Protein
MRPS31	Ribosome Protein
MRPS33	Ribosome Protein
MRPS34	Ribosome Protein
MRPS35	Ribosome Protein
MRPS36	Ribosome Protein
MRPS5	Ribosome Protein
MRPS6	Ribosome Protein
MRPS7	Ribosome Protein
MRPS9	Ribosome Protein
MRRF	Ribosome Protein
MRS2	Other
MSRA	Antioxidant
MSRB2	Antioxidant
MTCH1	Other
MTCH2	Other
MTCP1	Cell Function
MTERF	Protein Metabolism
MTERFD1	Other
MTERFD3	Other
MTFMT	tRNA
MTFP1	Cell Function
MTFR1	Cell Function
MTG1	Other
MTHFD1	Nucleotide Metabolism
MTHFD1L	Nucleotide Metabolism
MTHFD2	Nucleotide Metabolism
MTHFD2L	Nucleotide Metabolism
MTHFR	Other Enzymes
MTHFS	Nucleotide Metabolism
MTIF2	Protein Metabolism
MTIF3	Protein Metabolism
MTO1	Protein Metabolism
MTPAP	DNA/RNA
MTRF1	Protein Metabolism
MTRF1L	Protein Metabolism
MTRR	Other Enzymes
MTX1	Other
MTX2	Other
MUL1	Other Enzymes
MUT	Lipid Metabolism
MYL10	Other
NAGS	Other Enzymes
NARS	tRNA
NARS2	tRNA
NCOA4	Other
NDUFA1	Complex I

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<b>Gene</b>	<b>Functional Category</b>
NDUFA10	Complex I
NDUFA11	Complex I
NDUFA12	Complex I
NDUFA13	Complex I
NDUFA2	Complex I
NDUFA3	Complex I
NDUFA4	Complex I
NDUFA5	Complex I
NDUFA6	Complex I
NDUFA7	Complex I
NDUFA8	Complex I
NDUFA9	Complex I
NDUFAB1	Complex I
NDUFAF1	Complex I
NDUFAF2	Complex I
NDUFAF3	Complex I
NDUFAF4	Complex I
NDUFAF5	Complex I
NDUFAF6	Complex I
NDUFAF7	Complex I
NDUFB1	Complex I
NDUFB10	Complex I
NDUFB11	Complex I
NDUFB2	Complex I
NDUFB3	Complex I
NDUFB4	Complex I
NDUFB5	Complex I
NDUFB6	Complex I
NDUFB7	Complex I
NDUFB8	Complex I
NDUFB9	Complex I
NDUFC1	Complex I
NDUFC2	Complex I
NDUFS1	Complex I
NDUFS2	Complex I
NDUFS3	Complex I
NDUFS4	Complex I
NDUFS5	Complex I
NDUFS6	Complex I
NDUFS7	Complex I
NDUFS8	Complex I
NDUFV1	Complex I
NDUFV2	Complex I
NDUFV3	Complex I
NEU4	Other Enzymes
NFS1	Iron Metabolism
NFU1	Iron Metabolism
NFXL1	Other
NIF3L1	Other



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<b>Gene</b>	<b>Functional Category</b>
NIPSNAP1	Other
NIPSNAP3A	Other
NIPSNAP3B	Other
NIT1	Other Enzymes
NLN	Neurotransmitters
NLRX1	Other
NME1	Other Enzymes
NME2	Other Enzymes
NME3	Other Enzymes
NME4	Other Enzymes
NME6	Other Enzymes
NNT	Ion Channel
NOA1	Other
NOS3	Neurotransmitters
NPL	Other Enzymes
NRD1	Protein Metabolism
NRF1	Cell Function
NRXN1	Cell Function
NT5C	Nucleotide Metabolism
NT5C3	Nucleotide Metabolism
NT5DC3	Nucleotide Metabolism
NT5M	Nucleotide Metabolism
NTHL1	Nucleotide Metabolism
NUBPL	Complex I
NUDT13	Nucleotide Metabolism
NUDT19	Nucleotide Metabolism
NUDT2	Nucleotide Metabolism
NUDT8	Nucleotide Metabolism
OAT	Neurotransmitters
OCIAD1	Other
OGDH	TCA Cycle
OGDHL	TCA Cycle
OGG1	DNA/RNA
OMA1	Other Enzymes
OPA1	DNA/RNA
OPA3	DNA/RNA
OSGEPL1	Other Enzymes
OTC	Other Enzymes
OXA1L	Other Enzymes
OXCT1	Other Enzymes
OXCT2	Other Enzymes
OXLD1	Other Enzymes
OXNAD1	Other Enzymes
OXR1	Antioxidant
OXSM	Lipid Metabolism
PACRG	Other
PAH	Amino Acid Metabolism
PAK7	GTPase
PAM16	Other

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<b>Gene</b>	<b>Functional Category</b>
PANK2	Other Enzymes
PARK2	Other Enzymes
PARK7	Antioxidant
PARL	Membrane Protein
PARP1	Other Enzymes
PARS2	tRNA
PC	TCA Cycle
PCBD1	Amino Acid Metabolism
PCBD2	Amino Acid Metabolism
PCCA	Other Enzymes
PCCB	Other Enzymes
PCK1	Carbohydrate Metabolism
PCK2	TCA Cycle
PDE12	Other Enzymes
PDHA1	Pyruvate Dehydrogenase
PDHA2	Pyruvate Dehydrogenase
PDHB	Pyruvate Dehydrogenase
PDHX	Pyruvate Dehydrogenase
PDK1	Pyruvate Dehydrogenase
PDK2	Pyruvate Dehydrogenase
PDK3	Pyruvate Dehydrogenase
PDK4	Pyruvate Dehydrogenase
PDP1	Pyruvate Dehydrogenase
PDP2	Pyruvate Dehydrogenase
PDPR	TCA Cycle
PDSS1	Coenzyme Q
PDSS2	Coenzyme Q
PDX1	Cell Function
PET112	Other
PEX1	Peroxisomes
PEX10	Peroxisomes
PEX11A	Peroxisomes
PEX11B	Peroxisomes
PEX12	Peroxisomes
PEX13	Peroxisomes
PEX14	Peroxisomes
PEX16	Peroxisomes
PEX19	Peroxisomes
PEX2	Peroxisomes
PEX26	Peroxisomes
PEX3	Peroxisomes
PEX5	Peroxisomes
PEX5L	Peroxisomes
PEX6	Peroxisomes
PEX7	Peroxisomes
PFKL	Carbohydrate Metabolism
PGAM2	Carbohydrate Metabolism
PGK1	Carbohydrate Metabolism
PGS1	Carbohydrate Metabolism

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<b>Gene</b>	<b>Functional Category</b>
PHB	Cell Function
PHB2	Cell Function
PHYH	Peroxisomes
PHYHIPL	Peroxisomes
PIGY	Other
PINK1	Antioxidant
PISD	Lipid Metabolism
PITRM1	Other Enzymes
PKLR	Carbohydrate Metabolism
PLA2G15	Lipid Metabolism
PLGRKT	Membrane Protein
PMPCA	Protein Metabolism
PMPCB	Protein Metabolism
PNKD	Other
PNMT	Neurotransmitters
PNPT1	DNA/RNA
POLG	DNA/RNA
POLG2	DNA/RNA
POLRMT	DNA/RNA
PPA2	Other
PPARGC1A	Other
PPARGC1B	Other
PPIF	Protein Metabolism
PPM1B	Cell Function
PPM1K	Cell Function
PPOX	Iron Metabolism
PPT1	Protein Metabolism
PPTC7	Other
PRDX1	Antioxidant
PRDX2	Antioxidant
PRDX3	Antioxidant
PRDX5	Antioxidant
PRDX6	Antioxidant
PRELID1	Other
PRELID2	Other
PREPL	Protein Metabolism
PRICKLE4	Other
PRKAA2	Lipid Metabolism
PRKAB1	Cell Function
PRKAB2	Lipid Metabolism
PRODH	Amino Acid Metabolism
PRODH2	Amino Acid Metabolism
PROSC	Amino Acid Metabolism
PRR5L	Other
PRSS35	Protein Metabolism
PSTK	tRNA
PTCD2	Other
PTCD3	Other
PTGES2	Lipid Metabolism

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<b>Gene</b>	<b>Functional Category</b>
PTGR2	Lipid Metabolism
PTPMT1	Protein Metabolism
PTRH1	tRNA
PTRH2	tRNA
PTS	Cell Function
PUS1	tRNA
PXMP2	Membrane Protein
PYCR1	Amino Acid Metabolism
QDPR	Amino Acid Metabolism
QRSL1	tRNA
RAB11A	GTPase
RAB11B	GTPase
RAB11FIP5	GTPase
RAB1B	GTPase
RAB24	GTPase
RAB32	GTPase
RAB35	GTPase
RAB3D	GTPase
RAB40AL	GTPase
RAB4B	GTPase
RAB8B	GTPase
RARS	tRna
RARS2	tRNA
RDH13	Cell Function
RDH14	Cell Function
REEP1	Cell Function
REXO2	DNA/RNA
RFK	Other
RHOA	GTPase
RHOT1	GTPase
RHOT2	GTPase
RILP	GTPase
RMND1	Cell Function
RNASEH1	DNA/RNA
RNASEL	DNA/RNA
RNMTL1	DNA/RNA
ROMO1	Antioxidant
RPL10A	Ribosome Protein
RPL34	Ribosome Protein
RPL35A	Ribosome Protein
RPS14	Ribosome Protein
RPS15A	Ribosome Protein
RPUSD4	DNA/RNA
RRM2B	DNA/RNA
RSAD1	Other
RSPH9	Other
RTN4IP1	Other
RYR1	Ion Channel
RYR2	Ion Channel

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<b>Gene</b>	<b>Functional Category</b>
SACS	Other
SAMM50	Cell Function
SARDH	Amino Acid Metabolism
SARS	tRNA
SARS2	tRNA
SCCPDH	Other Enzymes
SCN1A	Ion Channel
SCN1B	Ion Channel
SCN2A	Ion Channel
SCN4A	Ion Channel
SCN5A	Ion Channel
SCO1	Complex IV
SCO2	Complex IV
SCP2	Lipid Metabolism
SDHA	Complex II
SDHAF1	Complex II
SDHAF2	Complex II
SDHB	Complex II
SDHC	Complex II
SDHD	Complex II
SDSL	Other Enzymes
SECISBP2	Other
SEPT4	Cell Function
SERAC1	Cell Function
SERHL2	Amino Acid Metabolism
SFXN1	Other
SFXN2	Other
SFXN3	Other
SFXN4	Other
SFXN5	Other
SHMT1	Amino Acid Metabolism
SHMT2	Amino Acid Metabolism
SIRT1	Cell Function
SIRT2	Cell Function
SIRT3	Cell Function
SIRT5	Cell Function
SLC16A1	Solute Carrier
SLC19A2	Solute Carrier
SLC19A3	Solute Carrier
SLC22A4	Solute Carrier
SLC22A5	Solute Carrier
SLC25A1	Solute Carrier
SLC25A10	Solute Carrier
SLC25A11	Solute Carrier
SLC25A12	Solute Carrier
SLC25A13	Solute Carrier
SLC25A14	Solute Carrier
SLC25A15	Solute Carrier
SLC25A16	Solute Carrier

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<b>Gene</b>	<b>Functional Category</b>
SLC25A17	Solute Carrier
SLC25A18	Solute Carrier
SLC25A19	Solute Carrier
SLC25A2	Solute Carrier
SLC25A20	Solute Carrier
SLC25A21	Solute Carrier
SLC25A22	Solute Carrier
SLC25A23	Solute Carrier
SLC25A24	Solute Carrier
SLC25A25	Solute Carrier
SLC25A26	Solute Carrier
SLC25A27	Solute Carrier
SLC25A28	Solute Carrier
SLC25A29	Solute Carrier
SLC25A3	Solute Carrier
SLC25A30	Solute Carrier
SLC25A31	Solute Carrier
SLC25A32	Solute Carrier
SLC25A33	Solute Carrier
SLC25A34	Solute Carrier
SLC25A35	Solute Carrier
SLC25A36	Solute Carrier
SLC25A37	Solute Carrier
SLC25A38	Solute Carrier
SLC25A39	Solute Carrier
SLC25A4	Solute Carrier
SLC25A40	Solute Carrier
SLC25A41	Solute Carrier
SLC25A42	Solute Carrier
SLC25A43	Solute Carrier
SLC25A44	Solute Carrier
SLC25A45	Solute Carrier
SLC25A46	Solute Carrier
SLC25A47	Solute Carrier
SLC25A48	Solute Carrier
SLC25A5	Solute Carrier
SLC25A51	Solute Carrier
SLC25A6	Solute Carrier
SLC27A4	Solute Carrier
SLC2A1	Solute Carrier
SLC30A6	Solute Carrier
SLC37A4	Solute Carrier
SLC3A1	Solute Carrier
SLC6A8	Solute Carrier
SLIRP	Other
SLMO1	Other
SLMO2	Other
SMCR7L	Other
SMDT1	Ion Channel

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<b>Gene</b>	<b>Functional Category</b>
SND1	Other
SNPH	Cell Function
SOD1	Antioxidant
SOD2	Antioxidant
SPAST	Cell Function
SPG20	Cell Function
SPG7	Cell Function
SPR	Other Enzymes
SPRYD4	Other
SPTLC2	Lipid Metabolism
SQRDL	Other
SSBP1	Cell Function
STAR	Other
STOML2	Other
SUCLA2	TCA Cycle
SUCLG1	TCA Cycle
SUCLG2	TCA Cycle
SUOX	Amino Acid Metabolism
SUPV3L1	Other
SURF1	Complex IV
TACO1	Complex IV
TAMM41	Other
TAP1	ABC Transporters
TARS2	tRNA
TAT	Amino Acid Metabolism
TATDN3	DNA/RNA
TAZ	Other
TBRG4	Cell Function
TCAIM	Other
TCIRG1	Cell Function
TDP1	DNA/RNA
TDRKH	Other
TFAM	DNA/RNA
TFB1M	DNA/RNA
TFB2M	DNA/RNA
THEM4	Cell Function
THEM5	Cell Function
THG1L	tRNA
TIMM10	Membrane Protein
TIMM13	Membrane Protein
TIMM17A	Membrane Protein
TIMM17B	Membrane Protein
TIMM21	Other Enzymes
TIMM22	Membrane Protein
TIMM23	Membrane Protein
TIMM44	Membrane Protein
TIMM50	Membrane Protein
TIMM8A	Membrane Protein
TIMM8B	Membrane Protein

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<b>Gene</b>	<b>Functional Category</b>
TIMM9	Membrane Protein
TIMMDC1	Other Enzymes
TK2	DNA/RNA
TMEM11	Membrane Protein
TMEM126A	Membrane Protein
TMEM143	Membrane Protein
TMEM14C	Membrane Protein
TMEM160	Membrane Protein
TMEM186	Membrane Protein
TMEM22	Membrane Protein
TMEM223	Membrane Protein
TMEM65	Membrane Protein
TMEM70	Complex V
TMTC1	Membrane Protein
TOMM20	Membrane Protein
TOMM22	Membrane Protein
TOMM34	Membrane Protein
TOMM40	Membrane Protein
TOMM40L	Membrane Protein
TOMM5	Membrane Protein
TOMM7	Membrane Protein
TOMM70A	Membrane Protein
TOP1MT	DNA/RNA
TPH2	Neurotransmitters
TPI1	Carbohydrate Metabolism
TPK1	Carbohydrate Metabolism
PPP1	Protein Metabolism
TRAP1	Cell Function
TRIAP1	Cell Function
TRIT1	tRNA
TRMT10C	tRNA
TRMT2B	tRNA
TRMU	tRNA
TRNT1	tRNA
TSFM	DNA/RNA
TSHZ3	Other
TSPO	Cell Function
TST	Other
TTC19	Other
TUFM	DNA/RNA
TXN	Cell Function
TXN2	Cell Function
TXNRD1	Cell Function
TXNRD2	Cell Function
TYMP	Cell Function
UBE3A	Protein Metabolism
UCP1	Cell Function
UCP2	Cell Function
UCP3	Cell Function



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<b>Gene</b>	<b>Functional Category</b>
UNG	DNA/RNA
UQCC	Membrane Protein
UQCR10	Complex III
UQCR11	Complex III
UQCRB	Complex III
UQCRC1	Complex III
UQCRC2	Complex III
UQCRFS1	Complex III
UQCRH	Complex III
UQCRQ	Complex III
UROS	Iron Metabolism
USMG5	Other
USP24	Protein Metabolism
UXS1	Cell Function
VAMP1	Cell Function
VAMP8	Cell Function
VARS2	tRNA
VAT1	Cell Function
VDAC1	Ion Channel
VDAC2	Ion Channel
VDAC3	Ion Channel
VDR	Other Enzymes
WARS2	tRNA
WBSCR16	Other
WFS1	Other
WWOX	Cell Function
XPNPEP3	Protein Metabolism
YARS2	tRNA
YBEY	Other Enzymes
YME1L1	Other
ZADH2	Other Enzymes