Supplementary Table S2. Coding sequences (CDS) of all the included 224 human autophagy genes.

>lcl|NM_017749.3_cds_NP_060219.2_1 [gene=AMBRA1] [db_xref=CCDS:CCDS31475.1] [protein=activating molecule in BECN1-regulated autophagy protein 1 isoform 2] [protein_id=NP_060219.2] [location=361..3987] [gbkey=CDS]

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>lcl|NM_004044.7_cds_NP_004035.2_1 [gene=ATIC] [db_xref=CCDS:CCDS2398.1] [protein=bifunctional purine biosynthesis protein ATIC] [protein_id=NP_004035.2] [location=85..1863] [gbkey=CDS]

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>lcl|NM_004323.6_cds_NP_004314.6_1 [gene=BAG1] [db_xref=CCDS:CCDS35004.1] [protein=BAG family molecular chaperone regulator 1 isoform BAG-1L] [protein_id=NP_004314.6] [location=35..1072] [gbkey=CDS]

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>lcl|NM_004281.4_cds_NP_004272.2_1 [gene=BAG3] [db_xref=CCDS:CCDS7615.1] [protein=BAG family molecular chaperone regulator 3] [protein_id=NP_004272.2] [location=297..2024] [gbkey=CDS]

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>lcl|NM_001188.4_cds_NP_001179.1_1 [gene=BAK1] [db_xref=CCDS:CCDS4781.1] [protein=bcl-2 homologous antagonist/killer] [protein_id=NP_001179.1] [location=284..919] [gbkey=CDS]

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TCATGA

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CTGGTGCTCAAGGCCCTGTGCACCAAGGTGCCGGAACTGATCAGAACCATCATGGGCTGGACATTGGACT

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CCGCTGCAGACCCCGGCTGCCCCCGGCGCCGCCGCGGGGCCTGCGCTCAGCCCGGTGCCACCTGTGGTCC

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CCTATCTGGGCCACAAGTGA

>lcl|NM_138578.3_cds_NP_612815.1_1 [gene=BCL2L1] [db_xref=CCDS:CCDS13189.1] [protein=bcl-2-like protein 1 isoform Bcl-X(L)] [protein_id=NP_612815.1] [location=382..1083] [gbkey=CDS]

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GA

>lcl|NM_003766.5_cds_NP_003757.1_1 [gene=BECN1] [db_xref=CCDS:CCDS11441.1] [protein=beclin-1 isoform a] [protein_id=NP_003757.1] [location=153..1505] [gbkey=CDS]

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>lcl|NM_001290693.1_cds_NP_001277622.1_1 [gene=BECN2] [db_xref=CCDS:CCDS81433.1] [protein=beclin-2] [protein_id=NP_001277622.1] [location=1..1296] [gbkey=CDS]

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>lcl|NM_197966.3_cds_NP_932070.1_1 [gene=BID] [db_xref=CCDS:CCDS13747.1] [protein=BH3-interacting domain death agonist isoform 1] [protein_id=NP_932070.1] [location=295..1020] [gbkey=CDS]

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>lcl|NM_172226.3_cds_NP_757380.1_1 [gene=CAMKK2] [db_xref=CCDS:CCDS9218.1] [protein=calcium/calmodulin-dependent protein kinase kinase 2 isoform 2] [protein_id=NP_757380.1] [location=132..1757] [gbkey=CDS]

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>lcl|NM_001024649.2_cds_NP_001019820.1_1 [gene=CANX] [db_xref=CCDS:CCDS4447.1] [protein=calnexin isoform d precursor] [protein_id=NP_001019820.1] [location=87..1865] [gbkey=CDS]

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AAGCAACAAGGATGACAAGAAAAACATGGGGAAACAGATGCCTCAGCCTACTTTCACACTAAGAAAAAAA

CTTGTCTTCCCTTCTGATTGA

>lcl|NM_002982.4_cds_NP_002973.1_1 [gene=CCL2] [db_xref=CCDS:CCDS11277.1] [protein=C-C motif chemokine 2 precursor] [protein_id=NP_002973.1] [location=66..365] [gbkey=CDS]

ATGAAAGTCTCTGCCGCCCTTCTGTGCCTGCTGCTCATAGCAGCCACCTTCATTCCCCAAGGGCTCGCTC

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CCCAAACTCCGAAGACTTGA

>lcl|NM_001123041.3_cds_NP_001116513.2_1 [gene=CCR2] [db_xref=CCDS:CCDS43078.1] [protein=C-C chemokine receptor type 2 isoform A] [protein_id=NP_001116513.2] [location=119..1243] [gbkey=CDS]

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TCCCTATAATATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC

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TCTATGCCTTCGTTGGGGAGAAGTTCAGAAGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACT

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CCTAG

>lcl|NM_172361.3_cds_NP_758871.1_1 [gene=CD46] [db_xref=CCDS:CCDS1484.1] [protein=membrane cofactor protein isoform 12 precursor] [protein_id=NP_758871.1] [location=160..1227] [gbkey=CDS]

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CCAAAGTGTCTTAAAGGATATCCTAAACCTGAGGAAGGAATACTTGACAGTTTGGATGTTTGGGTCATTG

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>lcl|NM_078467.3_cds_NP_510867.1_1 [gene=CDKN1A] [db_xref=CCDS:CCDS4824.1] [protein=cyclin-dependent kinase inhibitor 1 isoform 1] [protein_id=NP_510867.1] [location=100..594] [gbkey=CDS]

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GCGATGGAACTTCGACTTTGTCACCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGC

CTTGGCCTGCCCAAGCTCTACCTTCCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGC

GGCCTGGCACCTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTG

TACCCTTGTGCCTCGCTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGA

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CCTAA

>lcl|NM_004064.5_cds_NP_004055.1_1 [gene=CDKN1B] [db_xref=CCDS:CCDS8653.1] [protein=cyclin-dependent kinase inhibitor 1B] [protein_id=NP_004055.1] [location=473..1069] [gbkey=CDS]

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>lcl|NM_000077.5_cds_NP_000068.1_1 [gene=CDKN2A] [db_xref=CCDS:CCDS6510.1] [protein=cyclin-dependent kinase inhibitor 2A isoform p16INK4a] [protein_id=NP_000068.1] [location=31..501] [gbkey=CDS]

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GCCGATCCAGGTCATGATGATGGGCAGCGCCCGAGTGGCGGAGCTGCTGCTGCTCCACGGCGCGGAGCCC

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TGGTGGTGCTGCACCGGGCCGGGGCGCGGCTGGACGTGCGCGATGCCTGGGGCCGTCTGCCCGTGGACCT

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>lcl|NM_003879.7_cds_NP_003870.4_1 [gene=CFLAR] [db_xref=CCDS:CCDS2337.1] [protein=CASP8 and FADD-like apoptosis regulator isoform 1] [protein_id=NP_003870.4] [location=456..1898] [gbkey=CDS]

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>lcl|NM_014043.4_cds_NP_054762.2_1 [gene=CHMP2B] [db_xref=CCDS:CCDS2918.1] [protein=charged multivesicular body protein 2b isoform 1] [protein_id=NP_054762.2] [location=215..856] [gbkey=CDS]

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>lcl|NM_000086.2_cds_NP_000077.1_1 [gene=CLN3] [db_xref=CCDS:CCDS10632.1] [protein=battenin isoform a] [protein_id=NP_000077.1] [location=324..1640] [gbkey=CDS]

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>lcl|NM_147780.4_cds_NP_680090.1_1 [gene=CTSB] [db_xref=CCDS:CCDS5986.1] [protein=cathepsin B isoform 1 preproprotein] [protein_id=NP_680090.1] [location=275..1294] [gbkey=CDS]

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>lcl|NM_001909.5_cds_NP_001900.1_1 [gene=CTSD] [db_xref=CCDS:CCDS7725.1] [protein=cathepsin D preproprotein] [protein_id=NP_001900.1] [location=69..1307] [gbkey=CDS]

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>lcl|NM_001455.4_cds_NP_001446.1_1 [gene=FOXO3] [db_xref=CCDS:CCDS5068.1] [protein=forkhead box protein O3] [protein_id=NP_001446.1] [location=293..2314] [gbkey=CDS]

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>lcl|NM_000152.5_cds_NP_000143.2_1 [gene=GAA] [db_xref=CCDS:CCDS32760.1] [protein=lysosomal alpha-glucosidase preproprotein] [protein_id=NP_000143.2] [location=343..3201] [gbkey=CDS]

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>lcl|NM_007278.2_cds_NP_009209.1_1 [gene=GABARAP] [db_xref=CCDS:CCDS11092.1] [protein=gamma-aminobutyric acid receptor-associated protein] [protein_id=NP_009209.1] [location=120..473] [gbkey=CDS]

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>lcl|NM_001363598.2_cds_NP_001350527.1_1 [gene=GABARAPL1] [db_xref=CCDS:CCDS86280.1] [protein=gamma-aminobutyric acid receptor-associated protein-like 1 isoform 1] [protein_id=NP_001350527.1] [location=254..694] [gbkey=CDS]

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CTGA

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>lcl|NM_014365.3_cds_NP_055180.1_1 [gene=HSPB8] [db_xref=CCDS:CCDS9189.1] [protein=heat shock protein beta-8] [protein_id=NP_055180.1] [location=383..973] [gbkey=CDS]

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>lcl|NM_000619.3_cds_NP_000610.2_1 [gene=IFNG] [db_xref=CCDS:CCDS8980.1] [protein=interferon gamma precursor] [protein_id=NP_000610.2] [location=126..626] [gbkey=CDS]

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>lcl|NM_001193321.2_cds_NP_001180250.1_1 [gene=IKBKE] [db_xref=CCDS:CCDS53464.1] [protein=inhibitor of nuclear factor kappa-B kinase subunit epsilon isoform 3] [protein_id=NP_001180250.1] [location=482..2377] [gbkey=CDS]

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>lcl|NM_006850.3_cds_NP_006841.1_1 [gene=IL24] [db_xref=CCDS:CCDS1471.1] [protein=interleukin-24 isoform 1 precursor] [protein_id=NP_006841.1] [location=276..896] [gbkey=CDS]

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>lcl|NM_017644.3_cds_NP_060114.2_1 [gene=KLHL24] [db_xref=CCDS:CCDS3246.1] [protein=kelch-like protein 24 isoform b] [protein_id=NP_060114.2] [location=296..2098] [gbkey=CDS]

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>lcl|NM_005561.4_cds_NP_005552.3_1 [gene=LAMP1] [db_xref=CCDS:CCDS41909.1] [protein=lysosome-associated membrane glycoprotein 1 precursor] [protein_id=NP_005552.3] [location=197..1450] [gbkey=CDS]

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>lcl|NM_001122606.1_cds_NP_001116078.1_1 [gene=LAMP2] [db_xref=CCDS:CCDS48159.1] [protein=lysosome-associated membrane glycoprotein 2 isoform C precursor] [protein_id=NP_001116078.1] [location=181..1416] [gbkey=CDS]

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>lcl|NM_001297555.2_cds_NP_001284484.1_1 [gene=MAP2K7] [db_xref=CCDS:CCDS74277.1] [protein=dual specificity mitogen-activated protein kinase kinase 7 isoform 1] [protein_id=NP_001284484.1] [location=69..1376] [gbkey=CDS]

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>lcl|NM_014330.5_cds_NP_055145.3_1 [gene=PPP1R15A] [db_xref=CCDS:CCDS12738.1] [protein=protein phosphatase 1 regulatory subunit 15A] [protein_id=NP_055145.3] [location=241..2265] [gbkey=CDS]

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>lcl|NM_001276289.2_cds_NP_001263218.1_1 [gene=PRKAR1A] [db_xref=CCDS:CCDS11678.1] [protein=cAMP-dependent protein kinase type I-alpha regulatory subunit isoform a] [protein_id=NP_001263218.1] [location=259..1404] [gbkey=CDS]

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>lcl|NM_001316327.2_cds_NP_001303256.1_1 [gene=PRKCD] [db_xref=CCDS:CCDS2870.1] [protein=protein kinase C delta type isoform c] [protein_id=NP_001303256.1] [location=201..2231] [gbkey=CDS]

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>lcl|NM_006257.5_cds_NP_006248.1_1 [gene=PRKCQ] [db_xref=CCDS:CCDS7079.1] [protein=protein kinase C theta type isoform 1] [protein_id=NP_006248.1] [location=76..2196] [gbkey=CDS]

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>lcl|NM_001256358.2_cds_NP_001243287.1_1 [gene=PTK6] [db_xref=CCDS:CCDS74750.1] [protein=protein-tyrosine kinase 6 isoform 2] [protein_id=NP_001243287.1] [location=63..467] [gbkey=CDS]

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GGTGA

>lcl|NM_182965.3_cds_NP_892010.2_1 [gene=SPHK1] [db_xref=CCDS:CCDS11744.1] [protein=sphingosine kinase 1 isoform 2] [protein_id=NP_892010.2] [location=498..1910] [gbkey=CDS]

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>lcl|NM_003932.5_cds_NP_003923.2_1 [gene=ST13] [db_xref=CCDS:CCDS14006.1] [protein=hsc70-interacting protein isoform 1] [protein_id=NP_003923.2] [location=100..1209] [gbkey=CDS]

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>lcl|NM_000455.5_cds_NP_000446.1_1 [gene=STK11] [db_xref=CCDS:CCDS45896.1] [protein=serine/threonine-protein kinase STK11 isoform 1] [protein_id=NP_000446.1] [location=1137..2438] [gbkey=CDS]

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GCGAGCACCCGCCCATGATTCTTCGGACTGACTGA

>lcl|NM_021260.4_cds_NP_067083.1_1 [gene=ZFYVE1] [db_xref=CCDS:CCDS9811.1] [protein=zinc finger FYVE domain-containing protein 1 isoform 1] [protein_id=NP_067083.1] [location=616..2949] [gbkey=CDS]

ATGAGTGCCCAGACTTCCCCAGCAGAGAAGGGCCTGAATCCGGGGCTGATGTGCCAGGAAAGTTACGCTT

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TGTTACTGTGTACAATGTCAGTAATCTCCAGGAGTCACTGGAGGCAGAAGAGATGGATGAGGAGACCAAG

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CCGAGTGTATACCTGCAAGGCCTGCTATGAGAGAGGCGAGGAAGTCAGTGTAGTGCCCAAAACATCTGCT

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