

Human Autophagy PCR Array
<b>Autophagy Machinery Components:</b>
<u>Genes Involved in Autophagic Vacuole Formation:</u> AMBRA1 (NYW1), ATG12, ATG16L1, ATG4A, ATG4B, ATG4C, ATG4D, ATG5, ATG9A, ATG9B, BECN1, GABARAP, GABARAPL1, GABARAPL2, IRGM, MAP1LC3A, MAP1LC3B, RGS19, ULK1, WIPI1.
<u>Genes Responsible for Protein Targeting to Membrane / Vacuole:</u> ATG4A, ATG4B, ATG4C, ATG4D, GABARAP.
<u>Genes Responsible for Protein Transport:</u> ATG10, ATG16L1, ATG16L2, ATG3, ATG4A, ATG4B, ATG4C, ATG4D, ATG7, ATG9A, GABARAP, GABARAPL2, RAB24.
<u>Genes Linking Autophagosome to Lysosome:</u> DRAM1, GABARAP, LAMP1, NPC1.
<u>Genes Involved in Protein Ubiquitination:</u> ATG3, ATG7, HDAC6.
<u>Genes with Protease Activity:</u> ATG4A, ATG4B, ATG4C, ATG4D.
<b>Regulation of Autophagy:</b>
<u>Co-Regulators of Autophagy and Apoptosis:</u> AKT1, APP, ATG12, ATG5, BAD, BAK1, BAX, BCL2, BCL2L1 (BCL-X), BECN1, BID, BNIP3, CASP3, CASP8 (FLICE), CDKN1B (p27KIP1), CDKN2A (p16INK4), CLN3, CTSB, CXCR4, DAPK1, DRAM1, EIF2AK3, FADD, FAS (TNFRSF6), HDAC1, HTT, IFNG, IGF1, INS, MAPK8 (JNK1), MTOR, NFKB1, PIK3CG, PRKAA1, PTEN, SNCA, SQSTM1, TGFB1, TGM2, TNF, TNFSF10 (TRAIL), TP53.
<u>Co-Regulators of Autophagy and the Cell Cycle:</u> BAX, CDKN1B (p27KIP1), CDKN2A (p16INK4), IFNG, PTEN, RB1, TGFB1, TP53.
<u>Autophagy Induction by Intracellular Pathogens:</u> EIF2AK3, IFNG, LAMP1.
<u>Autophagy in Response to Other Intracellular Signals:</u> CTSD, CTSS, DRAM2 (TMEM77), EIF4G1, ESR1 (ERa), GAA, HGS, MAPK14, PIK3C3 (VPS34), PIK3R4, RPS6KB1, TMEM74, ULK2, UVRAG.
<u>Chaperone-Mediated Autophagy:</u> HSP90AA1, HSPA8.