

Human Cellular Senescence PCR Array

Senescence Pathway: ATM, BMI1, CCND1, CCNE1, CDK2, CDK4, CDK6, CDKN1A, CDKN2A (p16INK4), CDKN2D, CHEK1, CHEK2, E2F1, E2F3, ETS1, ETS2, MDM2, RB1, RBL2, TP53, TWIST1.

Senescence Initiators:

p53/pRb Signaling (Cell cycle): ABL1, AKT1, ALDH1A3, CCNA2, CCNB1, CDC25C, CDKN1C, CDKN2B (p15INK4b), CDKN2C, CITED2, CREG1, GSK3B, ID1, IGF1R, IGFBP3, ING1, MAP2K6, MAPK14, MORC3, MYC, PCNA, PIK3CA, PLAU, RBL1, SERPINB2 (PAI-2), SERPINE1 (PAI-1), SIRT1, SPARC, TGFB1.

Interferon Related: ALDH1A3, CDKN1A, CDKN1B (p27KIP1), EGR1, IFNG, IGFBP3, IGFBP7, IRF3, IRF5, IRF7, NFKB1, RB1, SERPINB2 (PAI-2).

Insulin Growth Factor (IGF) Related: IGF1, IGF1R, IGFBP3, IGFBP5, IGFBP7.

Mitogen-Activated Protein Kinase (MAPK) Signaling: HRAS, MAP2K1, MAP2K3, MAP2K6, MAPK14.

Oxidative Stress: ALDH1A3, HRAS, MAPK14, NOX4, PRKCD, SOD1, SOD2.

DNA Damage: ATM, GADD45A, NBN, PCNA, TERF2, TERT, TP53BP1.

Senescence Responses:

p53 Effectors: ALDH1A3, E2F1, HRAS, IGFBP3, MYC.

p21 Effector: CALR.

p16 Effectors: TBX2, TBX3.

Cytoskeleton Related: AKT1, FN1, HRAS, PIK3CA, PLAU, SERPINE1 (PAI-1), SPARC, THBS1, VIM.

Cell Adhesion: CD44, COL1A1, COL3A1, TGFB1, TGFB1I1, THBS1.

Other: GLB1, PTEN.