SMALL CELL LUNG CANCER

Neuroendocrine epithelial cells

Primary small cell carcinoma

Metastatic small cell carcinoma

Pulmonary neuroendocrine epithelial cell

K01522 → ? → Reduced apoptosis
Cell-cycle progression

Overexpression → K02161 ⊣ K08738 (Mitochondrion) → K04399 (Apoptosis) → Inhibition of apoptosis

K02084 → K04399

p53 signaling pathway

Retinoic acid → K08528 / K08524... → DNA → Tumour progression

DNA damage → K04451 → DNA → Impaired G1 and G2 arrest
Reduced apoptosis
Genomic instability

K04685 ⊣ K02089... / K04503

DNA → K16063 ⊣ K04377 / K04453

DNA → K02219 → K04503

p27 Kip1 ⊣ K02206 / K06626 (+p) → K06618 (+p) ⊣ K17454... → DNA → G1/S progression

Cell cycle

Genetic alterations

Oncogene : Myc

Tumor suppressors : RARβ, FHIT, p53, RB, PTEN

ECM-receptor interaction

K05635... → K06476... / K05719 → K05725 → K00922... → PIP3 → K04456 (+p) → K04467... (+p) → K04734 → Degradation

K04734 ⊣ K02580...

K01110 (-p) ⊣ PIP3

Focal adhesion

PI3K-Akt signaling pathway

K02580... → DNA

DNA → CyclinD1 → Proliferation

DNA → K16060... / K04570 / K03172... → Resistance to apoptosis signal

Apoptosis

DNA → K11987 / K13241 → Angiogenesis

05222 8/7/13