**Table S1.** Mutations and other information of NSCLC cell lines used in this study.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cell line** | **Mutation** | **Gene sequence** | **tissue** | **pathology** | **Age** | **Gender** |
| **A549** | KRAS | c.34G>A | lung | carcinoma | 58 | male |
| **A549** | CDKN2A | c.1\_471del471 | lung | carcinoma | 58 | male |
| **A549** | STK11 | p.Q37\* | lung | carcinoma | 58 | male |
| **H838** | TP53 | c.184G>T | LN | adenocarcinoma | 59 | male |
| **H838** | CDKN2A | c.1\_471del471 | LN | adenocarcinoma | 59 | male |
| **H838** | STK11 | p.T212fs | LN | adenocarcinoma | 59 | male |
| **H1299** | KRAS | c.181C>A | LN | carcinoma | 43 | male |
| **HCC827** | EGFR | E746 ­ A750 del | lung | adenocarcinoma | 39 | female |
| **PC9** | EGFR | E746 ­ A750 del | lung | adenocarcinoma | - | male |
| **H1650** | EGFR | c.2235\_2249del15 | PE | adenocarcinoma | 27 | male |
| **H1975** | EGFR | c.2369C>T | lung | adenocarcinoma | - | female |
| **H1975** | EGFR | c.2573T>G | lung | adenocarcinoma | - | female |

Note: LN, lymph node; PE, pleural effusion

**Table S2.** Autophagy- and lung cancer-related gene expression in 3 lung cell lines according to CCLE database.

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene** | **A549** | **H838** | **H1299** |
| *STK11* | 3.38 | 2.29 | 6.29 |
| *PRKAA1* | 20.70 | 18.33 | 20.11 |
| *STAT3* | 37.97 | 17.83 | 7.56 |
| *MAP1LC3B* | 20.34 | 13.71 | 27.84 |
| *MTOR* | 6.71 | 8.11 | 15.08 |
| *SQSTM1* | 73.72 | 27.71 | 25.79 |
| *ATG7* | 4.36 | 3.29 | 4.95 |
| *BECN1* | 12.10 | 8.37 | 4.90 |
| *BCL2* | 0.13 | 1.05 | 0.54 |
| *CAMKK2* | 7.56 | 1.70 | 7.42 |
| *MET* | 78.02 | 9.98 | 12.72 |
| *EGFR* | 30.60 | 2.52 | 6.23 |
| *HIPK3* | 12.71 | 11.55 | 6.63 |

**Table S3.** Baseline clinicopathological characteristics of 76 NSCLC patients.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **High** | **Low** | **p value** |
| **n** |  | 25 | 51 |  |
| **Age (%)** |  | 66.2 (8.3) | 65.2 (10.2) | 0.671 |
| **Sex (%)** |  |  |  | 0.415 |
|  | Male | 12 (48.0) | 18 (35.3) |  |
|  | Female | 13 (52.0) | 33 (64.7) |  |
| **Stage (%)** |  |  |  | 0.233 |
|  | 1 | 17 (68.0) | 22 (43.1) |  |
|  | 2 | 3 (12.0) | 9 (17.6) |  |
|  | 3 | 4 (16.0) | 15 (29.4) |  |
|  | 4 | 1 (4.0) | 5 (9.8) |  |
| **T (%)** |  |  |  | 0.179 |
|  | 1 | 16 (64.0) | 19 (37.3) |  |
|  | 2 | 6 (24.0) | 23 (45.1) |  |
|  | 3 | 1 (4.0) | 3 (5.9) |  |
|  | 4 | 2 (8.0) | 6 (11.8) |  |
| **N (%)** |  |  |  | 0.172 |
|  | 0 | 20 (80.0) | 30 (58.8) |  |
|  | 1 | 2 (8.0) | 6 (11.8) |  |
|  | 2 | 3 (12.0) | 15 (29.4) |  |
| **M (%)** |  |  |  | 0.668 |
|  | 0 | 24 (96.0) | 46 (90.2) |  |
|  | 1 | 1 (4.0) | 5 (9.8) |  |
| **Differentiation (%)** | |  |  | 0.303 |
|  | Well | 4 (16.0) | 16 (32.0) |  |
|  | Moderate | 13 (52.0) | 19 (38.0) |  |
|  | Poor | 8 (32.0) | 15 (30.0) |  |
| **Therapy after OP (%)** | |  |  | 0.324 |
|  | Yes | 9 (36.0) | 26 (51.0) |  |
|  | No | 16 (64.0) | 25 (49.0) |  |
| **Kras mutation (%)** | |  |  | 1 |
|  | Yes | 10 (43.5) | 18 (43.9) |  |
|  | No | 15 (56.5) | 33 (56.1) |  |

Stage: TNM Classification of Malignant Tumors, 7th Edition, NCC