

**Table S3. SNaPshot and sizing assay results for lung cancer cell lines.** Among 35 samples, 23 (65.7%) mutations were found: *EGFR*: 8 (22.9%), *KRAS*: 8 (22.9%), *BRAF*: 1 (2.9%), *PIK3CA*: 2 (5.7%), *MEK1*: 1 (2.9), *NRAS*: 2 (5.7%), *HER2*: 1 (2.9%). WT: wildtype. bps: basepairs. ins :insertion. del: deletion. \*: these 19 samples were assessed independently by two different individuals in the laboratory, and 100% concordance was obtained.

| Cell Lines | EGFR                               | KRAS         | BRAF              | NRAS            | PIK3CA            | MEK1            | HER2         | AKT1 | PTEN |
|------------|------------------------------------|--------------|-------------------|-----------------|-------------------|-----------------|--------------|------|------|
| A549*      | WT                                 | G12S; 34G>A  | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| BFTC       | WT                                 | WT           | WT                | Q61L;<br>182A>T | WT                | WT              | WT           | WT   | WT   |
| Calu 3*    | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| 11-18*     | L858R; 2573T>G                     | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1437*     | WT                                 | WT           | WT                | WT              | WT                | Q56P;<br>167A>C | WT           | WT   | WT   |
| H157*      | WT                                 | G12R;34G>C   | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1648*     | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1650*     | 19 del (15bps)                     | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1666      | WT                                 | WT           | G466V;<br>1397T>C | WT              | WT                | WT              | WT           | WT   | WT   |
| H1781*     | WT                                 | WT           | WT                | WT              | WT                | WT              | 20 ins(3bps) | WT   | WT   |
| H1819*     | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1975*     | T790M; 2368C>T<br>L858R; 2573T>G   |              | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H1993*     | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H2009*     | WT                                 | G12A; 35G>C  | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H2030*     | WT                                 | G12C; 34G>T  | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H23*       | WT                                 | G12C; 34G>T  | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H2882*     | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H3255*     | L858R; 2573T>G                     | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H358*      | WT                                 | G12C; 34G>T  | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H460       | WT                                 | Q61H; 183A>T | WT                | WT              | E545K;<br>1633G>A | WT              | WT           | WT   | WT   |
| H522*      | WT                                 | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |
| H320*      | T790M; 2368C>T,<br>19 del (12 bps) | WT           | WT                | WT              | WT                | WT              | WT           | WT   | WT   |

Formatted: French (France)

| Cell Lines | EGFR           | KRAS          | BRAF | NRAS            | PIK3CA             | MEK1 | HER2 | AKT1 | PTEN |
|------------|----------------|---------------|------|-----------------|--------------------|------|------|------|------|
| PC-9       | 19 del (15bps) | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H226       | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| HCC95      | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H520       | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| SKMES-1    | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| SW900      | WT             | G12V; c.35G>T | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H69        | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H82        | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H146       | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H209       | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| H1618      | WT             | WT            | WT   | WT              | WT                 | WT   | WT   | WT   | WT   |
| Detroit562 | WT             | WT            | WT   | WT              | H1047R;<br>3140A>G | WT   | WT   | WT   | WT   |
| HCC15      | WT             | WT            | WT   | Q61K;<br>181C>A | WT                 | WT   | WT   | WT   | WT   |