**Supplemental Table 3. Detailed Profile of Key Genetic Mutation in Cell Lines Studied.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Human**  **Specimen**  **ID** | **Primary**  **Staging** | **Age** &  **Sex** | **Pathology** | **Mutation**  **Type** | **Gene** | **Gene**  **ID** | **cDNA Change** | **Protein Change** |
| Pt93 | T3N1bM1 | 63M | Metastatic peritoneum & abdominal wall poorly differentiated adenocarcinoma from colon primary | Frameshift | APC | 324 | NM\_000038.5:c.5375dupA | NP\_000029.2:p.Asn1792LysfsTer7 |
| Missense | BRAF | 673 | NM\_004333.4:c.1799T>A | NP\_004324.2:p.Val600Glu |
| Missense | MTOR | 2475 | NM\_004958.3:c.6709A>G | NP\_004949.1:p.Ile2237Val |
| Pt130 | T3N0M1a | 76M | Metastatic colonic adenocarcinoma | Missense | BRAF | 673 | NM\_004333.4:c.1799T>A | NP\_004324.2:p.Val600Glu |
| Missense | FGFR1 | 2260 | NM\_001174067.1:c.2557C>T | NP\_001167538.1:p.Arg853Cys |
| Frameshift | TP53 | 7157 | NM\_000546.5:c.455delC | NP\_000537.3:p.Pro152ArgfsTer18 |
| Frameshift | TP53 | 7157 | NM\_000546.5:c.267dupC | NP\_000537.3:p.Ser90LeufsTer59 |
| Pt2377-1⁰ | T3N0M1a | 66F | Metastatic colonic adenocarcinoma (primary tumor) | Stop gained | APC | 324 | NM\_000038.5:c.2212A>T | NP\_000029.2:p.Lys738Ter |
| Frameshift | APC | 324 | NM\_000038.5:c.4666dupA | NP\_000029.2:p.Thr1556AsnfsTer3 |
| Missense | KRAS | 3845 | NM\_033360.2:c.436G>A | NP\_203524.1:p.Ala146Thr |
| Missense | PIK3CA | 5290 | NM\_006218.2:c.1633G>A | NP\_006209.2:p.Glu545Lys |
| Pt2377-LM | T3N0M1a | 66F | Metastatic colonic adenocarcinoma (Liver metastasis) | Stop gained | APC | 324 | NM\_000038.5:c.2212A>T | NP\_000029.2:p.Lys738Ter |
| Frameshift | APC | 324 | NM\_000038.5:c.4666dupA | NP\_000029.2:p.Thr1556AsnfsTer3 |
| Missense | KRAS | 3845 | NM\_033360.2:c.436G>A | NP\_203524.1:p.Ala146Thr |
| Missense | PIK3CA | 5290 | NM\_006218.2:c.1633G>A | NP\_006209.2:p.Glu545Lys |
| HCT116  CCL-247™ | Dukes’  type D | 48M | Colon adenocarcinoma | Missense | KRAS | 3845 | NM\_033360.2:c.38G>A | p.Gly13Asp |
| Missense | PIK3CA | 5286 | NM\_006218.2: c.3140A>G | p.His1047Arg |
| HT29  HTB-38™ | Dukes’  type C | 44F | Colon adenocarcinoma | Frameshift | APC | 324 | NM\_000038.5:c.4666\_4667insA | p.Thr1556fs\*3 |
| Substitution–  Nonsense | APC | 324 | NM\_000038.5:c.2557G>T | p.Glu853\* |
| Missense | BRAF | 673 | NM\_004333.4:c.1799T>A | p.Val600Glu |
| Missense | BRAF | 673 | NM\_004333.4:c.356C>G | p.Thr119Ser |
| Missense | PIK3CA | 5286 | NM\_006218.2:c.1345C>A | p.Pro449Thr |
| Missense | TP53 | 7157 | NM\_000546.5:c.818G>A | p.Arg273His |
| LS174T  CL-188™ | Dukes’  type B | 58F | Colon adenocarcinoma | Missense | KRAS | 3845 | NM\_033360.2:c.35G>A | p.Gly12Asp |
| Missense | PIK3CA | 5286 | NM\_006218.2:c.3140A>G | p.His1047Arg |
| DLD1  CCL-221TM | Dukes’ type C | Adult M | Colon adenocarcinoma | Missense | APC | 324 | NM\_000038.5:c.2180G>T | p.Arg727Met |
| Missense | APC | 324 | NM\_000038.5:c.2979G>T | p.Lys993Asn |
| Frameshift | APC | 324 | NM\_000038.5:c.4248delC | p.Ile1417fs\*2 |
| Missense | APC | 324 | NM\_000038.5:c.6496C>T | p.Arg2166Ter |
| Missense | KRAS | 3845 | NM\_033360.2:c.38G>A | p.Gly13Asp |
| Missense | PIK3CA | 5286 | NM\_006218.2:c.1633G>A | p.Glu545Lys |
| Missense | PIK3CA | 5286 | NM\_006218.2:c.1645G>A | p.Asp549Asn |
| Missense | TP53 | 7157 | NM\_000546.5:c.722C>T | p.Ser241Phe |