**Methods – Supplementary File 1**

#### A) Fosmid probes for DNA FISH

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Locus | Gene | Start (bp) | End (bp) | Fosmid ID | Clone name |
| 7: 55019017-55211628 | EGFR | 55024189 | 55063180 | G248P88704G2 | WI2-2910M03 |
| 12: 57747727-57752310 | CDK4 | 57746054 | 57783419 | G248P80931E4 | WI2-0793J08 |
| 4: 54,229,293-54298245 | PDGFRA | 54230802 | 54268615 | G248P86466H11 | WI2-2022O22 |

#### B) CrRNA sequence and dsDNA sequence for mCherry\_PolR2G CRISPR knock-in

|  |  |  |
| --- | --- | --- |
| Locus | crRNA | dsDNA donor DNA block |
| POLR2G | ACCAAGGGTAGGAGGCCACC  |

|  |
| --- |
| TCCCTGATGGACGATTACTTGGGTGAGTGCCTGATCATAGGTGCTGGGGTTATTGCCTGGAGAAGGGATGTGTGGGGGTGGGGAGTAATATAGGATTCAATGCCCAAATCAGAGAGACAGAAGAAACTTTCATGCTGTCTGCTTGAAAGATCCAGGACATTTGCCTTGGGATGAGGAGTACATGGTTGTGGCTACCCTAAATTCCGGTTCTAACTGATATGCTTTTTCTGGTTTCGCAGGGCTTGTAAGCGGCGACGGCGGCAGCGGCGGCGGCAGCATGGTGAGCAAGGGCGAGGAGGATAACATGGCCATCATCAAGGAGTTCATGCGCTTCAAGGTGCACATGGAGGGCTCCGTGAACGGCCACGAGTTCGAGATCGAGGGCGAGGGCGAGGGCCGCCCCTACGAGGGCACCCAGACCGCCAAGCTGAAGGTGACCAAGGGTGGCCCCCTGCCCTTCGCCTGGGACATCCTGTCCCCTCAGTTCATGTACGGCTCCAAGGCCTACGTGAAGCACCCCGCCGACATCCCCGACTACTTGAAGCTGTCCTTCCCCGAGGGCTTCAAGTGGGAGCGCGTGATGAACTTCGAGGACGGCGGCGTGGTGACCGTGACCCAGGACTCCTCCCTGCAGGACGGCGAGTTCATCTACAAGGTGAAGCTGCGCGGCACCAACTTCCCCTCCGACGGCCCCGTAATGCAGAAGAAGACCATGGGCTGGGAGGCCTCCTCCGAGCGGATGTACCCCGAGGACGGCGCCCTGAAGGGCGAGATCAAGCAGAGGCTGAAGCTGAAGGACGGCGGCCACTACGACGCTGAGGTCAAGACCACCTACAAGGCCAAGAAGCCCGTGCAGCTGCCCGGCGCCTACAACGTCAACATCAAGTTGGACATCACCTCCCACAACGAGGACTACACCATCGTGGAACAGTACGAACGCGCCGAGGGCCGCCACTCCACCGGCGGCATGGACGAGCTGTACAAGTGAGGCTGGTGCCCTCCTACCCTTGGTCCTACTCTAGGAAGTGTGATTGTCACACTTATCATGTTGTCCAGAGGTCCAGTCTGGCTGCTGTTGTGGAGGCAAGGAAGGCAACTCATCCCAGAAGGCATCTGGTGCTTCTTGTAGCTTAACTACTGCCTCCTCATTTTTCAGTATGTGTTCTAAGTATAAAAAGTCCTTGG |

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A) Fosmid probes for DNA FISH Related to STAR Methods. Genome co-ordinates (Mb) are from the hg38 assembly of the human genome. B) CrRNA sequence and dsDNA sequence for mCherry\_PolR2G CRISPR knock-in.