

Supplementary table 1. Overview of constructed CRISPR/Cas9 multiplexing vectors (Golden Gate assembly method).

| Plasmid | Vector type | inserted gRNA (PAM) | Targeted gene | Exon | Strand | Position |
|----------------|-----------------------|----------------------------|----------------------|-------------|---------------|-----------------|
| px330A_1x3 | Destination vector 1* | GTGCACGGGTCGGGTGAGAG TGG | CDKN2A | 2/3 | – | chr9:21971109 |
| px330A_1x4 | Destination vector 2* | GTGCACGGGTCGGGTGAGAG TGG | KRAS | 2/6 | – | chr12:25398275 |
| px330S_C | Assembly vector | GTGCACGGGTCGGGTGAGAG TGG | CDKN2A | 2/3 | – | chr9:21971109 |
| px330S_T | Assembly vector | GCATGGGCGGCATGAACCGG AGG | TP53 | 3/8 | + | chr17:7577534 |
| px330S_S | Assembly vector | GATGTGATCTATGCCCGTCTC TGG | SMAD4 | 3/12 | + | chr18:48575081 |

*utilized for construction of C, CT and CTS vectors

**utilized for construction of K, KC, KCT and KCTS vectors