|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ACAN | chr15:89345951-89347024 | PAN-CANCER |  |  |
| GRIN2A | chr16:10276435-10277501 |  |  |  |
| HLA-DQB1 | chr6:32632183-32633188 | GWAS |  |  |
| HLA-DRB1 | chr6:32558232-32559239 | GWAS |  |  |
| HLA-A | chr6:29910703-29911251 | GWAS |  |  |
| SEPT9 | chr17:75447296-75447880 |  |  |  |
| AHRR | chr5: 374135-374471 |  |  |  |
| FGF8 | chr10: 103536092-103536593 |  |  |  |
| SHOX2 | chr3: 157812139-157812762 |  |  |  |
| F2RL3 | chr19:16,999,346-17,000,117 |  |  |  |
| PADI4 | chr1:17,634,426-17,634,894 |  |  |  |
| NTSR1 | chr20:61,340,262-61,340,678 |  |  |  |
| GALR1 | chr18:74,961,548-74,962,625 |  |  |  |
| AGTR1 | chr3:148,415,323-148,416,076 |  |  |  |
| APC | chr5:112,072,997-112,073,866 |  |  |  |
| GSC | chr14:95,237,019-95,237,833 |  |  |  |
| GSC2 | chr22:19,137,281-19,137,817 |  |  |  |
| PD-L1 | chr9:5,449,910-5,450,762 |  |  |  |
| ALDH1A2 | chr15:58,357,519-58,358,129 |  |  |  |
| C2orf40 | chr2:106,681,757-106,682,419 |  |  |  |
| CDO1 | chr5:115,152,095-115,152,722 |  |  |  |
| CTNNA3 |  |  |  |  |
| EPB41L3 | chr18:5,543,098-5,543,678 |  |  |  |
| EYA4 | chr6:133,562,083-133,563,297 |  |  |  |
| FAT4 | chr4:126,237,399-126,238,270 |  |  |  |
| FLT3 | chr13:28,674,035-28,674,706 |  |  |  |
| GATA5 | chr20:61,050,194-61,051,180 |  |  |  |
| GPC5 | chr13:92,050,901-92,051,465 |  |  |  |
| KLF4 | chr9:110,249,647-110,250,224 |  |  |  |
| MAPK10 | chr4:87,281,073-87,281,728 |  |  |  |
| NTRK3 | chr15:88,798,169-88,799,147 |  |  |  |
| PCDH10 | chr4:134,071,501-134,072,300 |  |  |  |
| SFRP1 | chr8:41,165,838-41,167,163 |  |  |  |
| ZBTB16 | chr11:113,930,307-113,931,106 |  |  |  |
| USP44 | chr12:95,941,859-95,942,589 |  |  |  |
| CRTAC1 | chr10:99,790,574-99,791,164 |  |  |  |
| DLGAP2 | chr8:1,649,168-1,649,805 |  |  |  |
| NRXN1 | chr2:51,259,087-51,260,014 |  |  |  |
| PCSK2 | chr20:17,206,516-17,206,967 |  |  |  |
| PLD5 | chr1:242,686,991-242,687,798 |  |  |  |
| TAC1 | chr7:97,360,968-97,361,614 |  |  |  |
| TMEM132C | chr12:128,751,314-128,752,227 |  |  |  |
| VWC2 | chr7:49,812,970-49,813,716 |  |  |  |
| ZNF132 | chr19:58,951,185-58,951,575 |  |  |  |
| LINC01798 | chr2:66,802,849-66,804,923 |  |  |  |
| LINC00643 | chr14:62,583,110-62,585,084 |  |  |  |
| LINC00982 | chr1:2,984,282-2,984,955 |  |  |  |
| LINC01197 | chr15:95,869,870-95,870,373 |  |  |  |
| HIF3A | chr19:46,800,065-46,800,567 |  |  |  |

5′-GGACGTATTTGGAAAATCGGG-3′

5′-AATCTCGCGATACGCCGTT-3′

5′-TTGAGTTGTGGTGGGTTTTATTTAG-3′

5′-TCATCTCACTAAAAAATACCAAACA-3′.

5’-TTGGTTAGGTGTGGGATATAGTT-3’

5’-CAAAAAATCAAAAAATTCCCTTTCC-3’

Line-1 F 5′TTATTAGGGAGTGTTAGATAGTGGG3′

Line-1 R 5′CCTCTAAACCAAATATAAAAT ATAATCTC3′;

ALU-C4 F 5’GGTTAGGTATAGTGGTTTATATTTGTAATTTTAGTA3’

ALU-C4 R 5’ATTAACTAAACTAATCTTAAACTCCTAACCTCA3’

GRIN2A (chr16:10,276,435-10,277,501) was found hyper-methylated in multiple cancer tissues.

ACAN