

Supplementary Table 4. Correlation table of DNA damage and repair gene methylation and mutation signature levels

| DDR gene | Snq2 | Snq3 | Snq4 | Snq5 | Snq6 | Snq7 | Snq8 | Snq9 | Snq10 | Snq11 | Snq12 | Snq13 | Snq14 | Snq15 | Snq16 | Snq17 | Snq18 | Snq19 | Snq20 | Snq21 | Snq22 | Snq23 | Snq24 | Snq25 | Snq26 | Snq27 | Snq28 | Snq29 | Snq30 | | |
|----------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| ALKBKH3 | 0.044 | -0.055 | -0.102 | -0.04 | -0.06 | 0.304 | -0.056 | -0.038 | 0.01 | 0.093 | -0.028 | -0.011 | -0.076 | 0.052 | 0.021 | -0.051 | 0.017 | -0.036 | 0.024 | 0.022 | -0.005 | -0.022 | -0.036 | -0.056 | -0.036 | 0.043 | -0.022 | -0.048 | -0.048 | -0.033 | |
| MLH1 | 0.114 | -0.029 | -0.07 | -0.109 | -0.039 | 0.234 | -0.058 | -0.013 | -0.01 | 0.063 | -0.03 | -0.063 | -0.067 | 0.023 | 0.056 | -0.053 | 0.008 | -0.005 | -0.037 | 0.009 | -0.002 | -0.037 | -0.038 | -0.105 | 0.116 | 0.036 | 0.013 | -0.116 | -0.044 | -0.024 | |
| MLPKIP1 | 0.202 | -0.028 | -0.204 | -0.07 | -0.113 | 0.225 | -0.067 | -0.085 | -0.015 | 0.011 | -0.059 | -0.082 | -0.034 | 0.014 | 0.081 | -0.087 | 0.21 | -0.011 | -0.055 | -0.084 | -0.01 | -0.077 | -0.056 | -0.097 | -0.055 | 0.077 | -0.024 | -0.012 | -0.047 | -0.075 | |
| EXM05 | 0.281 | -0.089 | -0.164 | -0.114 | -0.088 | 0.213 | -0.067 | -0.041 | -0.011 | -0.014 | -0.031 | -0.05 | -0.1 | 0.016 | 0.04 | -0.068 | 0.047 | -0.033 | -0.034 | -0.023 | 0.014 | -0.05 | -0.025 | -0.082 | -0.031 | 0.023 | 0.017 | -0.019 | -0.058 | -0.016 | |
| HLTF | 0.101 | -0.081 | -0.097 | -0.006 | -0.053 | 0.2 | -0.043 | -0.037 | -0.009 | -0.016 | -0.026 | -0.029 | -0.089 | -0.007 | 0.047 | -0.038 | 0.021 | -0.007 | -0.021 | -0.033 | 0.026 | -0.032 | -0.027 | -0.028 | -0.02 | 0.024 | -0.019 | -0.016 | -0.02 | -0.014 | |
| NSMICE3 | 0.037 | 0.024 | -0.082 | -0.014 | -0.052 | 0.141 | -0.021 | -0.026 | -0.014 | -0.005 | -0.03 | -0.035 | -0.007 | 0.017 | 0.014 | -0.033 | 0.069 | 0.002 | -0.016 | -0.032 | -0.021 | -0.032 | -0.028 | -0.039 | -0.019 | 0.007 | 0.012 | -0.014 | -0.017 | -0.011 | |
| UBE3A | 0.05 | 0.034 | -0.067 | -0.03 | -0.084 | 0.2 | -0.037 | -0.037 | -0.007 | -0.007 | -0.01 | 0.007 | -0.007 | 0.017 | 0.017 | -0.032 | 0.056 | 0.005 | -0.033 | -0.015 | -0.014 | -0.012 | -0.012 | -0.044 | -0.028 | 0.047 | -0.025 | -0.044 | -0.025 | -0.011 | |
| PPHR4 | -0.024 | -0.012 | -0.088 | -0.102 | -0.041 | 0.117 | -0.026 | -0.018 | 0.021 | -0.006 | -0.035 | -0.038 | -0.008 | 0.007 | -0.017 | -0.033 | 0.033 | -0.008 | 0.034 | -0.006 | -0.011 | -0.02 | -0.012 | -0.013 | -0.025 | 0.031 | -0.041 | -0.043 | -0.024 | -0.024 | |
| APX2 | 0.066 | 0.095 | 0.012 | -0.088 | -0.085 | 0.113 | -0.017 | -0.026 | 0.006 | 0.084 | -0.01 | -0.054 | 0.066 | 0.039 | -0.011 | -0.124 | -0.079 | -0.019 | -0.055 | -0.024 | -0.007 | -0.056 | -0.02 | -0.035 | -0.02 | -0.011 | -0.009 | -0.025 | 5E-04 | 0.006 | |
| ATRX | 0.048 | 0.083 | 0.033 | -0.08 | -0.082 | 0.111 | -0.017 | -0.026 | 0.004 | 0.079 | -0.008 | -0.044 | 0.054 | 0.042 | -0.004 | -0.12 | -0.081 | -0.018 | -0.047 | -0.023 | -0.033 | -0.052 | -0.012 | -0.033 | -0.021 | -0.003 | -0.012 | -0.024 | 0.015 | 0.003 | |
| POLE4 | 0.083 | -0.07 | -0.086 | 0.02 | -0.04 | 0.11 | 0.016 | -0.015 | -0.01 | -0.022 | ##### | -0.018 | -0.076 | 0.033 | 0.023 | -0.025 | -0.016 | 3E-04 | -0.024 | -0.005 | -0.005 | -0.004 | 0.009 | -0.03 | 0.003 | 0.005 | -0.032 | -0.027 | -0.018 | -0.006 | |
| PCP1 | 0.037 | 0.092 | 0.018 | -0.079 | -0.075 | 0.11 | -0.011 | -0.026 | -0.005 | 0.083 | -0.015 | -0.043 | 0.074 | 0.045 | -0.01 | -0.114 | -0.078 | -0.009 | -0.051 | -0.012 | -0.002 | -0.052 | -0.018 | -0.034 | -0.022 | -0.004 | -0.009 | -0.016 | -0.027 | -0.006 | |
| CDC22B | 0.088 | 0.016 | -0.11 | -0.022 | -0.047 | 0.108 | -0.035 | -0.031 | -0.025 | -0.005 | -0.034 | -0.019 | -0.008 | -0.024 | 0.014 | -0.038 | 0.055 | -0.014 | -0.027 | -0.046 | 0.008 | -0.032 | -0.025 | -0.045 | -0.026 | 0.019 | -0.016 | 0.015 | -0.032 | -0.004 | |
| RRM1 | -0.037 | 0.008 | -0.111 | 0.066 | 0.005 | 0.108 | 6E-04 | -0.021 | -0.008 | 0.026 | -0.013 | -0.004 | 0.032 | 9E-04 | -0.004 | -0.011 | 0.011 | -0.031 | 0.011 | -0.004 | -0.031 | -0.022 | -0.026 | -0.012 | 0.015 | -0.031 | 0.013 | 0.023 | -0.03 | -0.003 | |
| CTN2 | 0.049 | 0.07 | 0.079 | -0.085 | 0.084 | 0.107 | -0.027 | -0.033 | 0.004 | 0.076 | -0.009 | -0.058 | 0.04 | 0.049 | -0.01 | -0.128 | -0.083 | -0.01 | -0.041 | -0.038 | 0.008 | -0.058 | -0.007 | -0.029 | -0.027 | 0.007 | 0.008 | -0.016 | 0.009 | 0.009 | |
| RAD23B | -0.023 | 0.114 | -0.066 | -0.049 | -0.019 | 0.085 | 0.03 | -0.015 | -0.001 | 0.051 | 0.007 | -0.021 | 0.08 | 0.011 | -0.014 | 0.023 | 0.003 | -0.01 | -0.034 | 0.041 | 0.001 | -0.017 | -0.024 | -0.045 | 0.003 | -0.027 | -0.019 | -0.008 | -0.01 | -0.031 | |
| MORF4L1 | -0.041 | -0.083 | -0.095 | -0.026 | 0.029 | 0.076 | 0.004 | -0.003 | -0.002 | 0.068 | 0.004 | 0.02 | 0.076 | -0.005 | 0.018 | -0.043 | -0.109 | -0.015 | -0.025 | 0.024 | 0.024 | 0.032 | -0.008 | -0.017 | ##### | 0.014 | -0.021 | 0.025 | -0.018 | -0.018 | |
| WRN | -0.054 | 0.074 | -0.112 | 0.026 | -0.002 | 0.075 | 0.08 | -0.007 | -0.006 | 0.029 | 0.004 | -0.024 | 0.033 | -0.01 | 0.032 | 0.003 | 0.025 | 0.024 | -0.025 | -1E-03 | -0.008 | -0.035 | -0.013 | -0.03 | -0.022 | 0.012 | 0.034 | 0.002 | -0.022 | -0.024 | |
| SETMAR | 0.005 | 0.007 | -0.09 | 0.037 | -0.001 | 0.074 | -0.034 | -0.006 | 0.014 | 0.033 | -0.003 | -0.007 | -0.006 | -0.01 | 0.036 | -0.038 | 0.016 | 0.012 | -0.023 | 0.001 | 0.026 | -0.01 | -0.022 | -0.054 | -0.026 | 0.018 | -0.026 | -0.017 | -0.008 | -0.009 | |
| BARB1 | -0.027 | 0.043 | -0.073 | -0.089 | 0.061 | 0.073 | 0.039 | -0.015 | 0.007 | 0.041 | 0.021 | 0.017 | 0.001 | 0.025 | 0.044 | 0.062 | -0.037 | -0.004 | 0.004 | -0.002 | 0.051 | 0.059 | 0.021 | -0.02 | 0.005 | 0.007 | -0.022 | 0.014 | -0.025 | 0.007 | |
| HERC2 | 0.124 | 0.021 | -0.094 | -0.023 | -0.077 | 0.078 | -0.104 | -0.057 | -0.015 | 0.035 | -0.039 | -0.019 | -0.093 | 0.036 | 4E-04 | 5E-04 | 0.041 | 0.038 | -0.043 | -0.028 | -0.088 | -0.018 | -0.096 | -0.067 | -0.057 | -0.055 | -0.019 | 0.016 | -0.04 | -0.025 | -0.015 |
| UGC2 | -0.022 | -0.008 | -0.017 | -0.048 | 0.023 | 0.063 | -0.016 | -0.025 | -0.023 | 0.008 | -0.005 | -0.018 | -0.004 | -0.029 | -0.002 | -0.048 | 0.019 | -0.012 | -0.008 | 0.014 | -0.003 | -0.008 | -0.01 | -0.003 | -0.015 | -0.011 | -0.007 | -0.012 | -0.002 | 0.016 | |
| CHEK1 | -0.038 | -0.023 | -0.073 | 0.106 | -0.017 | 0.057 | -0.028 | -0.022 | -0.018 | 0.019 | -0.005 | 0.002 | 0.002 | 0.033 | 0.014 | -0.012 | 0.019 | -0.004 | -0.032 | 0.005 | 0.016 | -0.015 | -0.028 | 0.008 | -0.013 | -0.012 | -0.026 | 0.042 | 0.003 | -0.008 | |
| SPRTN | -0.012 | 0.022 | -0.034 | -0.061 | 0.052 | 0.066 | 0.043 | 0.042 | 2E-04 | 0.045 | 0.048 | -0.038 | 0.036 | 0.018 | -3E-04 | -0.136 | 0.013 | 0.034 | 0.042 | 0.048 | 0.048 | 0.049 | -0.04 | 0.017 | 0.026 | 0.005 | 0.042 | 0.014 | 0.053 | 0.004 | |
| XRC2 | 0.082 | -0.117 | -0.043 | -0.157 | 0.076 | 0.048 | 0.017 | 0.035 | 0.022 | 0.018 | 0.045 | 0.069 | -0.121 | 9E-04 | 0.051 | 0.065 | 0.035 | 0.009 | 0.038 | 0.036 | 0.037 | 0.054 | 0.031 | -0.027 | 0.026 | 0.038 | 0.011 | 0.056 | 0.015 | 0.034 | |
| RFC3 | -0.044 | 0.017 | -0.036 | -0.123 | -0.029 | 0.045 | -0.034 | -0.007 | -0.022 | 0.044 | -0.043 | -0.002 | -0.004 | 0.003 | 0.001 | -0.035 | -0.033 | 0.014 | -0.044 | -0.033 | -0.01 | -0.016 | -0.007 | -0.011 | -0.022 | -0.002 | -0.027 | -0.011 | -0.005 | -0.014 | |
| RP24 | -0.049 | -0.018 | -0.005 | 0.142 | -0.035 | 0.043 | -0.025 | -0.005 | -0.016 | -0.028 | -0.002 | -0.039 | -0.027 | 0.003 | -0.022 | -0.01 | -0.023 | -0.013 | -0.009 | -0.013 | -0.02 | -0.011 | -0.011 | 0.031 | -0.012 | 0.019 | -0.013 | -0.002 | -0.011 | -0.006 | |
| SMUG1 | -0.015 | -0.017 | -0.052 | 0.088 | -0.047 | 0.041 | -0.032 | -0.01 | -0.025 | 0.081 | -0.035 | -0.014 | -0.018 | 0.016 | 0.003 | -0.035 | -0.041 | -0.009 | -0.008 | 0.024 | -0.014 | -0.01 | -0.015 | 0.042 | 0.004 | -0.004 | -0.011 | -0.003 | -0.017 | -0.032 | |
| MSP2 | -0.027 | -0.003 | -0.098 | 0.298 | -0.028 | 0.014 | -0.022 | -0.026 | -0.044 | -0.026 | -0.034 | -0.018 | 0.031 | 0.013 | -0.032 | -0.032 | 0.007 | -0.047 | 0.043 | -0.013 | -0.023 | -0.003 | -0.004 | -0.01 | -0.008 | 0.034 | -0.015 | -0.019 | -0.027 | -0.013 | |
| RD1 | -0.004 | -0.063 | -0.063 | 0.029 | 0.017 | 0.038 | 0.058 | 0.014 | 0.002 | -0.012 | 0.029 | -0.001 | -0.062 | 0.002 | 0.067 | 0.011 | -0.023 | 0.01 | 0.007 | 0.017 | 0.03 | 0.019 | -0.015 | -0.008 | 0.024 | -0.022 | 0.019 | 0.008 | -0.014 | -0.004 | |
| DLX1E1A | 0.016 | 0.057 | -0.103 | -0.126 | 0.063 | 0.035 | 0.048 | 0.019 | 0.018 | 0.046 | 0.015 | 0.027 | 0.021 | 0.021 | 0.002 | 0.022 | -0.102 | 0.003 | -0.012 | 0.019 | 0.032 | -0.008 | 0.011 | -0.056 | 0.003 | 0.016 | 0.004 | 0.027 | 0.02 | 0.025 | |
| NSMICE2 | -0.011 | 0.016 | -0.123 | 0.132 | -0.021 | 0.035 | -0.042 | -0.033 | -0.022 | 0.028 | -0.012 | -0.017 | 0.037 | 0.004 | -0.019 | -0.011 | 0.002 | 0.015 | -0.042 | 0.023 | -0.005 | -0.026 | -0.04 | 0.013 | -0.026 | 0.011 | -0.04 | 0.048 | -0.031 | -0.043 | |
| FANCF | -0.023 | 0.053 | -0.058 | 0.06 | -0.019 | 0.031 | -0.004 | -0.02 | -0.021 | 0.025 | -0.028 | -0.013 | 0.035 | 0.011 | -0.022 | -0.016 | -0.028 | -0.012 | -0.029 | 0.007 | 0.017 | -0.015 | -0.013 | 0.004 | -0.016 | 0.04 | -0.011 | 0.002 | -0.019 | -0.021 | |
| ERC3 | 0.043 | 0.008 | -0.094 | -0.042 | -0.035 | 0.031 | -0.036 | -0.013 | -0.017 | 0.017 | -0.017 | -0.011 | -0.011 | -0.011 | 4E-04 | 0.021 | -0.023 | -0.002 | -0.018 | 0.003 | -0.009 | -0.029 | -0.028 | -0.011 | -0.019 | 0.024 | -0.023 | 0.053 | -1E-04 | 0.008 | |
| PER1 | -0.061 | 0.129 | -0.019 | -0.037 | -0.017 | 0.027 | 0.026 | -0.04 | -0.023 | 0.034 | -0.01 | -0.019 | 0.158 | -0.001 | -0.026 | -0.021 | -0.051 | -0.008 | -0.038 | -0.012 | -0.019 | -0.032 | -0.017 | 0.014 | -0.021 | 0.027 | -0.02 | -0.014 | -0.014 | 0.01 | |
| ASCX1 | -0.11 | 0.021 | -0.094 | -0.023 | -0.077 | 0.078 | -0.104 | -0.057 | -0.015 | 0.035 | -0.039 | -0.019 | -0.093 | 0.036 | 4E-04 | 5E-04 | 0.041 | 0.038 | -0.043 | -0.028 | -0.088 | -0.018 | -0.096 | -0.067 | -0.057 | -0.055 | -0.019 | 0.016 | -0.04 | -0.025 | -0.015 |
| DG1 | -0.19 | 0.102 | -0.164 | 0.169 | 0.023 | 0.043 | -0.039 | -0.026 | 0.009 | 0.004 | -0.024 | 0.033 | 0.153 | -0.008 | -0.028 | 0.041 | 0.058 | -0.021 | 0.05 | 0.002 | -0.024 | 0.002 | 0.005 | 0.004 | -0.012 | 0.045 | -0.017 | -0.029 | -0.002 | -0.004 | |
| OV5 | -0.013 | 0.013 | -0.175 | 0.143 | -0.003 | 0.023 | 0.013 | -0.033 | -0.028 | 0.011 | -0.037 | 8E-04 | 0.036 | 0.011 | -0.02 | 0.015 | -0.015 | -0.008 | 0.054 | -0.041 | 9E-04 | 0.01 | -0.035 | 0.008 | -0.016 | -0.015 | -0.065 | -0.05 | -0.041 | -0.051 | |
| RAD51D | 0.056 | 0.054 | -0.078 | 0.04 | -0.021 | 0.022 | -0.042 | -0.011 | -0.002 | 0.051 | -0.029 | -0.014 | -0.047 | 4E-04 | 0.019 | 0 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| ERCC6 | 0.026 | -0.065 | -0.028 | 0.038 | 0.007 | -0.023 | -0.014 | 0.037 | 0.011 | -0.002 | 0.039 | -0.015 | -0.058 | 0.034 | 0.037 | 0.002 | -0.006 | 0.026 | -0.008 | -0.004 | 0.007 | -9E-04 | 0.021 | 0.01 | 0.001 | -3E-04 | -0.013 | 0.032 | 0.017 | 0.015 |
| PARP4 | -0.039 | 0.015 | -0.128 | 0.217 | -0.035 | -0.023 | -0.017 | -0.053 | -0.025 | 0.007 | -0.023 | -0.014 | 0.021 | -0.009 | -0.024 | -0.009 | -0.012 | -0.012 | -0.068 | 0.036 | -1E-03 | 0.009 | -0.033 | 0.055 | -0.008 | 3E-04 | -0.039 | -5E-04 | -0.038 | -0.043 |
| PLK3 | -0.097 | 0.03 | -0.067 | 0.239 | -0.037 | -0.023 | -0.038 | -0.004 | -0.019 | 0.006 | -0.03 | -0.034 | 0.031 | -0.004 | -0.039 | -0.023 | -0.037 | 0.004 | -0.032 | 0.013 | -4E-04 | 0.035 | -0.029 | 0.067 | -0.006 | 2E-04 | -0.032 | 0.02 | -0.007 | -0.033 |
| PKP | -0.019 | -0.049 | -0.071 | 0.075 | 0.019 | -0.023 | -0.023 | 0.015 | -0.024 | -0.033 | 0.005 | 0.03 | -0.037 | -0.013 | 0.023 | 0.063 | -0.011 | 0.008 | 0.047 | 0.008 | 0.018 | 0.09 | 0.021 | 0.018 | 0.02 | 0.011 | -0.023 | 0.014 | 2E-04 | -0.044 |
| RFC1 | -0.05 | 0.011 | -0.023 | 0.128 | -0.029 | -0.024 | -0.033 | -0.007 | -0.009 | -0.011 | -0.014 | -0.013 | 0.011 | -0.006 | -0.022 | -0.016 | 0.004 | -0.008 | -0.024 | -0.004 | -0.008 | #### | -0.013 | 0.049 | 0.006 | -0.014 | -0.019 | -0.003 | 0.014 | -0.007 |
| SMARCA4 | -0.083 | -0.012 | -0.062 | 0.249 | -0.047 | -0.024 | -0.026 | -0.018 | -0.023 | -0.008 | -0.033 | -0.019 | 0.007 | -1E-03 | 0.045 | -0.025 | -0.04 | 0.016 | 0.006 | -0.014 | -0.012 | -0.028 | 0.075 | -0.008 | -0.013 | -0.024 | 0.012 | -0.006 | -0.026 | -0.026 |
| APLF | -0.094 | 0.003 | -0.034 | 0.239 | -0.029 | -0.024 | -0.028 | -0.02 | -0.021 | -0.009 | -0.028 | -0.011 | 0.008 | -0.005 | -0.043 | -0.043 | -0.039 | -0.009 | -0.028 | 0.029 | -0.022 | -0.023 | -0.013 | 0.061 | -0.012 | -0.003 | -0.015 | 0.025 | 0.005 | 0.016 |
| PMS1 | -0.105 | 0.021 | -0.134 | 0.302 | -0.025 | -0.026 | -0.029 | -0.03 | -0.035 | -0.015 | -0.035 | -0.018 | 0.026 | -0.004 | -0.02 | -0.004 | -0.034 | 0.006 | -0.032 | 0.025 | -0.009 | -0.005 | -0.024 | 0.069 | -0.015 | -1E-03 | -0.042 | 0.011 | -0.006 | -0.033 |
| POL1 | -0.045 | 0.025 | -0.028 | 0.119 | -0.029 | -0.026 | -0.013 | -0.011 | -0.005 | -0.007 | -0.012 | -0.018 | 0.036 | -0.011 | -0.019 | 0.005 | -0.021 | -0.004 | -0.02 | -0.011 | -0.003 | -1E-03 | -0.019 | 0.016 | -0.004 | -0.004 | -0.027 | 0.001 | -0.002 | -0.024 |
| HES1 | -0.151 | 0.022 | -0.071 | 0.303 | -0.034 | -0.026 | -0.001 | -0.014 | -0.03 | -0.024 | -0.024 | -0.034 | 0.036 | -0.007 | -0.037 | -0.026 | -0.027 | 0.021 | -0.035 | 0.008 | 0.007 | -0.022 | -0.015 | 0.069 | 0.009 | -0.009 | 0.007 | -0.002 | -0.011 | -0.03 |
| MIN1 | -0.008 | -0.048 | 0.104 | 0.069 | -0.008 | -0.026 | -0.033 | 0.007 | -0.013 | -0.036 | -2E-04 | -0.039 | -0.052 | 0.005 | -0.017 | -0.025 | -0.024 | 0.008 | -0.006 | -0.025 | -0.007 | -0.011 | 0.013 | 0.029 | 0.005 | -0.015 | -0.004 | -0.003 | 0.007 | 0.005 |
| RNFB2B | -0.059 | -0.018 | 0.016 | 0.173 | -0.03 | -0.026 | -0.022 | -0.03 | -0.027 | -0.017 | -0.014 | -0.031 | -0.022 | 0.01 | -0.028 | -0.032 | -0.035 | -0.002 | -0.018 | 0.012 | 0.021 | -0.003 | -0.004 | 0.049 | 0.006 | -0.014 | -0.019 | -0.003 | 0.014 | -0.007 |
| DNA1 | -0.036 | -0.012 | 0.073 | 0.071 | -0.022 | -0.026 | -0.033 | 0.004 | -0.005 | -0.044 | -0.007 | -0.028 | 0.005 | 0.012 | -0.024 | 0.004 | 0.004 | -0.021 | -0.003 | -0.035 | -0.021 | 0.042 | 0.001 | 0.036 | -0.009 | -0.01 | 0.036 | -0.009 | 0.007 | 0.007 |
| CDCL5 | -0.079 | 0.022 | -0.065 | 0.209 | -0.005 | -0.026 | -0.016 | -0.003 | -0.006 | -0.046 | -0.006 | -0.03 | 0.004 | 0.015 | -0.021 | -0.01 | -0.024 | 0.009 | -0.014 | 0.01 | -0.018 | -0.003 | -0.007 | 0.043 | 0.005 | -0.013 | -0.025 | 0.009 | -0.006 | 0.007 |
| NEIL2 | -0.053 | 0.003 | -0.097 | 0.163 | -0.008 | -0.027 | -0.013 | -0.026 | -0.014 | -0.008 | -0.017 | -0.024 | 0.016 | 0.007 | -0.03 | -0.002 | 0.078 | 0.007 | -0.028 | 0.022 | -0.012 | 0.003 | -0.035 | 0.034 | -0.005 | -0.012 | -0.026 | 0.102 | -0.004 | -0.024 |
| POLB | -0.109 | -0.019 | -0.038 | 0.174 | -0.011 | -0.027 | -0.013 | -0.02 | -0.022 | -0.027 | 0.009 | -0.007 | -0.019 | 0.013 | -0.018 | 0.006 | -0.006 | -0.009 | -0.021 | -0.004 | -0.018 | 0.025 | 4E-04 | 0.051 | 0.015 | -0.004 | -0.025 | 0.026 | 0.025 | 0.013 |
| RFC4 | -0.091 | 0.045 | -0.138 | 0.277 | -0.017 | -0.027 | -0.032 | -0.036 | -0.034 | -0.021 | -0.046 | -0.018 | 0.053 | -0.016 | -0.01 | 1E-03 | -0.039 | -0.005 | -0.058 | 0.03 | -0.02 | -0.008 | -0.042 | 0.06 | 0.013 | 0.007 | -0.05 | ##### | -0.03 | -0.039 |
| RAD18 | -0.16 | 0.031 | -0.113 | 0.357 | -0.03 | -0.027 | -0.021 | -0.028 | -0.031 | -0.019 | -0.034 | -0.014 | 0.037 | -0.018 | -0.038 | -0.017 | -0.013 | 0.007 | -0.052 | 0.046 | -0.007 | -0.009 | -0.012 | 0.079 | -0.017 | 0.004 | -0.055 | 0.013 | -0.032 | -0.035 |
| HMG1B1 | -0.106 | 2E-04 | -0.062 | 0.336 | -0.05 | -0.028 | -0.039 | -0.028 | -0.037 | -0.024 | -0.03 | -0.056 | 0.005 | -0.006 | -0.048 | -0.052 | -0.028 | -0.006 | -0.056 | 0.011 | -0.008 | -0.018 | -0.025 | 0.073 | -0.013 | -0.019 | -0.031 | -0.003 | 0.008 | -0.016 |
| NTH1 | -0.097 | 0.008 | -0.079 | 0.283 | -0.018 | -0.028 | -0.004 | -0.04 | -0.039 | -0.008 | 0.023 | -0.026 | 0.009 | -0.011 | -0.022 | -0.018 | -0.028 | 0.004 | -0.045 | 0.027 | -0.005 | -0.029 | -0.018 | 0.058 | -0.011 | -0.02 | -0.047 | 0.004 | -0.015 | 0.003 |
| FANCL | -0.047 | 0.01 | -0.059 | 0.184 | -0.022 | -0.028 | -0.03 | -0.033 | -0.018 | -0.005 | -0.023 | -0.018 | 0.027 | -0.013 | -0.028 | -0.038 | -7E-04 | -0.011 | -0.021 | 0.016 | -0.011 | -0.015 | -0.034 | 0.029 | -0.009 | -0.005 | -0.013 | 0.041 | -0.015 | -0.012 |
| CDCC25C | -0.1 | 0.012 | -0.07 | 0.26 | -0.028 | -0.028 | -0.03 | -0.008 | -0.015 | -0.009 | -0.021 | -0.013 | 0.011 | -0.007 | -0.021 | -0.028 | -0.05 | 0.004 | -0.037 | 0.028 | 0.002 | -0.013 | -0.019 | 0.066 | -0.009 | -0.003 | -0.028 | 0.011 | 0.008 | -0.006 |
| GFTRH4 | -0.079 | 0.007 | -0.058 | 0.243 | -0.041 | -0.028 | -0.011 | -0.029 | -0.022 | -0.019 | -0.014 | -0.024 | 0.015 | -0.005 | -0.041 | -0.031 | -0.018 | -0.002 | -0.022 | 0.014 | -0.01 | -0.01 | 0.019 | 0.055 | -0.006 | -0.007 | -0.025 | -6E-04 | -0.012 | -0.034 |
| NBN | -0.101 | 0.029 | 0.011 | 0.2 | -0.066 | -0.028 | -0.01 | -0.003 | -0.017 | -0.004 | -0.005 | -0.038 | 0.014 | 0.003 | -0.006 | -0.049 | -0.032 | -0.016 | -0.024 | -0.005 | 2E-04 | -0.01 | 0.006 | 0.066 | -0.014 | -0.016 | -0.026 | 0.023 | 0.003 | 0.003 |
| NFRPL40 | -0.108 | 0.042 | -0.06 | 0.246 | -0.043 | -0.029 | -0.032 | -0.027 | -0.033 | -0.008 | -0.047 | -0.023 | 0.052 | -0.01 | -0.037 | -0.004 | -0.034 | 0.007 | -0.044 | -0.002 | -0.021 | -0.009 | -0.009 | -0.008 | -0.014 | -0.028 | -0.008 | -0.011 | -0.023 | -0.023 |
| MNFAT2IP | -0.057 | -0.009 | -0.046 | 0.239 | -0.039 | -0.029 | -0.034 | -0.033 | -0.03 | -0.019 | -0.019 | -0.038 | 0.005 | -9E-04 | -0.034 | -0.042 | -0.02 | 0.002 | -0.021 | 0.007 | -3E-04 | -0.017 | -0.028 | 0.056 | -0.019 | -0.014 | -0.017 | -0.007 | 1E-03 | -0.002 |
| XRC | -0.073 | -0.053 | -0.051 | 0.12 | -0.029 | -0.03 | 0.064 | -0.009 | -0.017 | -0.027 | -0.02 | -0.037 | 0.029 | -0.005 | -0.007 | -0.003 | -0.023 | -0.008 | -0.004 | -0.01 | -0.005 | -0.018 | 0.007 | 0.025 | 0.012 | -0.014 | -0.029 | 0.003 | 0.025 | -0.023 |
| TFD2 | -0.037 | -0.03 | -0.06 | 0.165 | -0.037 | -0.03 | 0.013 | -0.022 | -0.02 | -0.018 | -0.001 | -0.028 | 0.011 | 0.009 | -0.025 | -0.016 | 0.019 | 0.006 | -0.028 | 0.007 | -0.009 | -0.012 | 0.021 | 0.022 | -0.014 | -0.011 | -0.026 | 0.042 | -0.008 | -0.028 |
| FANCD2 | -0.124 | 0.012 | -0.035 | 0.256 | -0.02 | -0.03 | -0.013 | -0.025 | -0.024 | -0.029 | -0.028 | -0.028 | 0.011 | -0.004 | -0.03 | 0.013 | 0.002 | 0.007 | -0.029 | 0.016 | -0.014 | -0.01 | -0.022 | -0.057 | -0.013 | -0.01 | -0.029 | 0.021 | -0.004 | -0.013 |
| ERCC2 | -0.087 | 0.034 | -0.071 | 0.092 | 0.052 | -0.03 | -0.013 | -2E-04 | 0.008 | -0.02 | 0.018 | 0.015 | 0.038 | 0.003 | -0.004 | 0.009 | 0.016 | 0.025 | 0.052 | 0.024 | 0.01 | 0.012 | -0.021 | 0.023 | 0.005 | -0.01 | -0.022 | 0.084 | 0.019 | 0.024 |
| UIMC1 | -0.078 | -0.008 | -0.06 | 0.238 | -0.045 | -0.03 | -0.018 | -0.005 | -0.029 | -0.019 | -0.023 | -0.041 | -0.001 | -0.001 | -0.009 | -0.031 | -0.013 | 0.012 | -0.042 | 0.001 | -0.007 | -0.01 | -0.018 | 0.063 | -0.01 | -0.022 | -0.022 | -0.003 | 0.011 | -0.02 |
| TYMS | -0.028 | -0.002 | -0.018 | 0.041 | 0.007 | -0.031 | -0.01 | 0.013 | -0.018 | -0.03 | 0.015 | -0.015 | -0.001 | -0.004 | 0.054 | 0.042 | -0.023 | 0.031 | 0.005 | -0.004 | 0.013 | 0.017 | -0.009 | 0.017 | -0.005 | 0.006 | -0.006 | -0.017 | 0.026 | 0.012 |
| POLD3 | -0.096 | 0.003 | -0.026 | 0.247 | -0.036 | -0.031 | -0.028 | -0.016 | -0.022 | -0.016 | -0.02 | -0.033 | 0.003 | -0.002 | -0.037 | -0.021 | -0.027 | 0.011 | -0.028 | 0.027 | -0.006 | -0.016 | -0.027 | 0.056 | -0.013 | -0.019 | -0.023 | 0.009 | -0.004 | -0.017 |
| PP4C | 0.004 | -0.134 | -0.037 | 0.003 | 0.075 | -0.031 | 0.051 | 0.024 | 0.031 | -0.037 | 0.036 | 0.087 | -0.144 | 0.002 | 0.064 | 0.067 | 0.008 | 0.012 | 0.033 | 0.056 | 0.033 | 0.1 | 0.028 | 0.033 | 0.036 | 0.027 | -0.014 | 0.064 | 0.026 | 0.045 |
| DDB1 | -0.087 | 0.009 | -0.074 | 0.243 | -0.032 | -0.038 | -0.004 | 0.017 | -0.025 | -0.021 | -0.02 | -0.032 | 0.011 | -0.011 | 0.003 | -0.008 | -0.012 | 0.038 | -0.035 | 0.009 | -0.021 | -0.009 | -0.028 | 0.051 | -0.019 | -0.01 | -0.04 | 1E-04 | -6E-04 | -0.041 |
| SMARCA4 | -0.088 | 0.004 | -0.036 | 0.206 | -0.017 | -0.032 | -0.019 | -0.02 | -0.018 | -0.014 | -0.01 | -0.022 | 0.007 | -0.003 | 0.003 | -0.012 | -0.028 | -0.003 | -0.002 | -0.018 | -0.009 | 0.007 | -0.019 | 0.056 | 7E-04 | -0.012 | -0.018 | -0.003 | -3E-04 | -0.015 |
| BCAS2 | -0.099 | 0.022 | -0.02 | 0.202 | -0.03 | -0.032 | -0.012 | -0.024 | -0.028 | -0.011 | -0.01 | -0.022 | 0.027 | -0.01 | -0.031 | -0.007 | -0.028 | -4E-04 | -0.034 | 0.015 | -0.006 | -0.006 | -0.025 | 0.056 | -0.007 | -0.006 | -0.032 | 0.013 | -0.011 | -0.01 |
| USP1 | -0.082 | 0.011 | -0.086 | 0.259 | -0.043 | -0.033 | -0.022 | -0.006 | -0.021 | -0.021 | -0.031 | -0.027 | 0.022 | 0.011 | -0.033 | -0.017 | -0.036 | 0.012 | -0.049 | 0.041 | -0.014 | -0.022 | -0.023 | 0.06 | -0.005 | -0.009 | -0.03 | -4E-04 | 0.008 | -0.028 |
| ERCC5 | -0.123 | -2E-04 | -0.059 | 0.293 | -0.034 | -0.034 | -0.006 | -0.02 | -0.02 | -0.026 | -0.03 | -0.04 | 0.012 | -0.019 | -0.027 | -0.031 | -0.013 | 0.009 | -0.029 | 0.028 | -0.012 | -0.009 | -0.013 | 0.061 | 0.003 | -0.009 | -0.029 | 0.002 | ##### | -0.021 |
| ERCC4 | -0.075 | -0.006 | 0.043 | 0.15 | -0.03 | -0.035 | -0.025 | -0.019 | -0.023 | -0.02 | -8E-04 | -0.032 | 0.001 | -0.008 | -0.018 | -0.011 | -0.013 | -0.013 | -0.015 | -0.016 | -0.013 | 0.005 | -0.005 | 0.064 | -0.012 | | | | | |