

Supplementary Table S3. Signaling pathways and the associated genes for colorectal cancer (CRC) based on Kyoto Encyclopedia of Genes and Genomes (KEGG).

Pathway	KEGG CRC Genes	References [https://www.genome.jp]
Cell cycle	<i>CCND1, GSK3B, MYC, SMAD2, SMAD3, SMAD4, TGFB1, TGFB2, TGFB3, TP53</i>	https://www.genome.jp/pathway/hsa04110
p53 signaling pathway	<i>BAX, BCL2, CASP3, CASP9, CCND1, CYCS, TP53</i>	https://www.genome.jp/pathway/hsa04115
Apoptosis	<i>AKT1, AKT2, AKT3, BAD, BAX, BCL2, BIRC5, CASP3, CASP9, CYCS, FOS, JUN, KRAS, MAP2K1, MAPK1, MAPK10, MAPK3, MAPK8, MAPK9, PIK3CA, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R3, RAF1, TP53, DCC, APPL1</i>	https://www.genome.jp/pathway/hsa04210
mTOR signaling pathway	<i>BRAF, GSK3B, KRAS, MAP2K1, MAPK1, PIK3CA, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R3, RAF1, RHOA</i>	https://www.genome.jp/pathway/hsa04150
PI3K-Akt signaling pathway	<i>AKT1, AKT2, AKT3, BAD, BCL2, CASP9, GSK3B, KRAS, MAP2K1, MAPK1, MAPK3, MYC, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R3, PIK3R5, RAC1, RAF1, TP53</i>	https://www.genome.jp/pathway/hsa04151
Wnt signaling pathway	<i>APC, APC2, AXIN1, AXIN2, CCND1, CTNNB1, GSK3B, JUN, LEF1, MAPK10, MAPK8, MAPK9, MYC, RAC1, RAC2, RAC3, RHOA, SMAD3, SMAD4, TCF7, TCF7L1, TCF7L2, TP53</i>	https://www.genome.jp/pathway/hsa04310
TGF-beta signaling pathway	<i>MAPK1, MAPK3, MYC, RHOA, SMAD2, SMAD3, SMAD4, TGFB1, TGFB2, TGFB3, TGFB1, TGFB2,</i>	https://www.genome.jp/pathway/hsa04350
MAPK signaling pathway	<i>AKT1, AKT2, AKT3, ARAF, BRAF, CASP3, FOS, JUN, KRAS, LEF1, MAP2K1, MAPK1, MAPK10, MAPK3, MAPK8, MAPK9, MYC, RAC1, RAC2, RAC3, RAF1, TGFB1, TGFB2, TGFB3, TGFB1, TGFB2, TP53</i>	https://www.genome.jp/pathway/hsa04010
ErbB signaling pathway	<i>AKT1, AKT2, AKT3, ARAF, BAD, BRAF, GSK3B, JUN, KRAS, MAP2K1, MAPK1, MAPK10, MAPK3, MAPK8, MAPK9, MYC, PIK3CA, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R3, RAF</i>	https://www.genome.jp/pathway/hsa04012
MSI pathway	<i>APC, AXIN1, AXIN2, BAD, BAX, BCL2, GSK3B, MLH1, MSH2, MSH3, MSH6, TGFB2</i>	https://www.genome.jp/dbget-bin/www_bget?path:map05210
Ras signaling pathway	<i>AKT1, AKT2, AKT3, BAD, KRAS, MAP2K1, MAPK1, MAPK10, MAPK3, MAPK8, MAPK9, PIK3CA, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R3, RAC1, RAC2, RAC3, RAF1, RALGDS, RHOA</i>	https://www.genome.jp/pathway/hsa04014