

Table S1 Differences analysis in baseline data of COAD patients between the training and test groups

Variables	Training	Test	P value
>65 years	32	69	0.1441
≤65 years	88	127	
Female	53	97	0.3842
Male	67	99	
Stage I-II	72	115	0.831
Stage III-IV	48	81	
T1-2	21	40	0.5355
T3-4	99	156	
M0	103	168	0.9491
M1	17	28	
N0	75	115	0.5055
N1-3	45	81	

COAD, colon adenocarcinoma.

Table S2 Functions of the protein in the prognostic signature and corresponding coefficient

Number	Signature	Full name of protein	Function	Risk coefficient
1	ACC_pS79	Acetyl-CoA carboxylase	Plays a role in carbohydrate and fatty acid metabolism	-0.22928
2	ARAF_pS299	Serine/threonine-protein kinase A-raf	Plays a role in the regulation of apoptotic process, TOR signaling and cellular protein metabolic process	-0.0163
3	CMET_pY1235	Hepatocyte growth factor receptor	Plays a role in cellular survival, embryogenesis, cellular migration, and invasion	-0.81793
4	H2AX_pS139	H2A histone family member X	Plays a role in transcription regulation, DNA repair, DNA replication and chromosomal stability	-0.13197
5	Aurora-ABC_pT288_pT232_pT198	Serine/threonine-protein kinase aurora-A/B/C	Plays a role in the regulation of cell cycle progression and mitosis	-0.40521
6	EGFR_pY1173	Epidermal growth factor receptor	Plays a role in the regulation of cell proliferation and resistance of several cancer types	-0.72816
7	SRC_pY527	SRC proto-oncogene, non-receptor tyrosine kinase	Plays a role in the regulation of embryonic development and cell growth	-0.07218
8	PI3K-p110b	Phosphoinositide-3-kinase C	Plays a role in regulation of cell growth, survival, proliferation, motility and morphology	0.650366

Table S3 The down-regulated and up-regulated DEPs in different risk score groups

Down-regulated	Up-regulated
Histone-H3	EGFR
Aurora-ABC_pT288_pT232_pT198	PGM1
Histone-H3_pS10	CIAP
Melanoma-gp100	BiP-GRP78
DM-Histone-H3	ENY2
NDUFB4	BAD_pS112
PAX6	DJ1
MSH2	c-IAP2
ACC_pS79	1433ZETA
MMP2	Atg7
Puma	ACETYLATUBULINLYS40
Creb	PI3K-p110-b
RB	MERIT40
Tyro3	53BP1
EGFR_pY1173	P62LCKLIGAND
CIITA	HER2
c-Abl_pY412	HMHA1
RAD51	SIRP-alpha
RICTOR_pT1135	MTCO1
SFRP1	
Cdc6	
BRAF_pS445	
BRCA2	
CMET_pY1235	
CD20	
MelanA	
MRE11	
H2AX_pS139	
CYCLINE2	
CRAF_pS338	
AMPK-a2_pS345	
STATHMIN	
ATR	