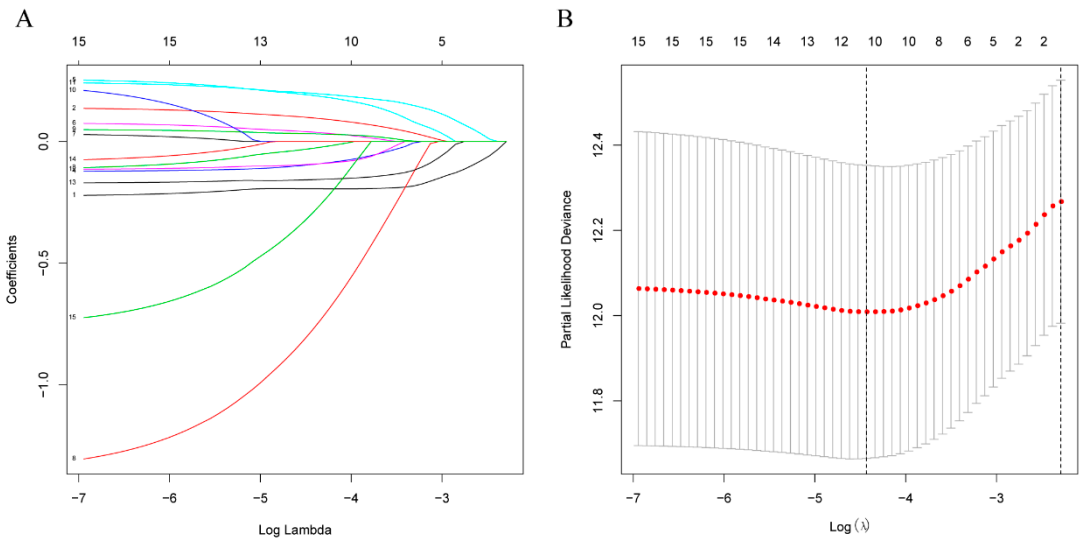


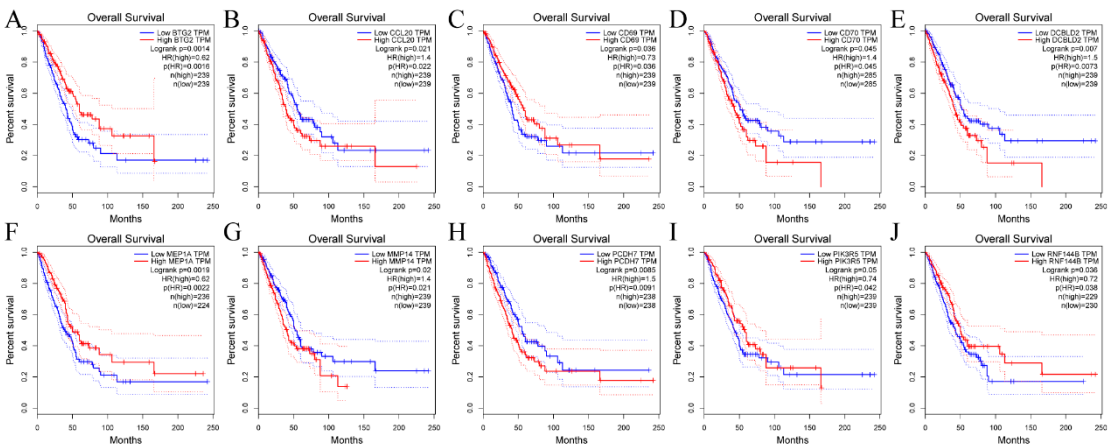
Supplementary Material:

An inflammatory response-related gene signature can predict the prognosis and impact the immune status of lung adenocarcinoma

Supplementary Figures:



Supplementary Figure S1. Constructed an 8-gene signature in the TCGA cohort. (A) LASSO coefficient expression profiles of 15 candidate genes. (B) The penalty parameter (λ) in the LASSO model was selected through ten cross-validation.



Supplementary Figure S2. Survival analysis of prognostic genes according to the optimal cut-off expression value. TCGA cohort(A–H). All adjusted $P < 0.05$.

Supplementary Tables:

Table S1 The 200 inflammatory response-related genes

Gene Symbol	Gene Description
ABCA1	ATP binding cassette subfamily A member 1
ABI1	abl interactor 1
ACVR1B	activin A receptor type 1B
ACVR2A	activin A receptor type 2A
ADM	adrenomedullin
ADORA2B	adenosine A2b receptor
ADRM1	adhesion regulating molecule 1
AHR	aryl hydrocarbon receptor
APLNR	apelin receptor
AQP9	aquaporin 9
ATP2A2	ATPase sarcoplasmic/endoplasmic reticulum Ca ²⁺ transporting 2
ATP2B1	ATPase plasma membrane Ca ²⁺ transporting 1
ATP2C1	ATPase secretory pathway Ca ²⁺ transporting 1
AXL	AXL receptor tyrosine kinase
BDKRB1	bradykinin receptor B1
BEST1	bestrophin 1
BST2	bone marrow stromal cell antigen 2
BTG2	BTG anti-proliferation factor 2
C3AR1	complement C3a receptor 1
C5AR1	complement C5a receptor 1
CALCRL	calcitonin receptor like receptor
CCL17	C-C motif chemokine ligand 17
CCL2	C-C motif chemokine ligand 2
CCL20	C-C motif chemokine ligand 20
CCL22	C-C motif chemokine ligand 22
CCL24	C-C motif chemokine ligand 24
CCL5	C-C motif chemokine ligand 5
CCL7	C-C motif chemokine ligand 7
CCR7	C-C motif chemokine receptor 7
CCRL2	C-C motif chemokine receptor like 2
CD14	CD14 molecule
CD40	CD40 molecule
CD48	CD48 molecule
CD55	CD55 molecule (Cromer blood group)
CD69	CD69 molecule
CD70	CD70 molecule
CD82	CD82 molecule
CDKN1A	cyclin dependent kinase inhibitor 1A
CHST2	carbohydrate sulfotransferase 2
CLEC5A	C-type lectin domain containing 5A
CMKLR1	chemerin chemokine-like receptor 1
CSF1	colony stimulating factor 1

CSF3	colony stimulating factor 3
CSF3R	colony stimulating factor 3 receptor
CX3CL1	C-X3-C motif chemokine ligand 1
CXCL10	C-X-C motif chemokine ligand 10
CXCL11	C-X-C motif chemokine ligand 11
CXCL6	C-X-C motif chemokine ligand 6
CXCL9	C-X-C motif chemokine ligand 9
CXCR6	C-X-C motif chemokine receptor 6
CYBB	cytochrome b-245 beta chain
DCBLD2	discoidin, CUB and LCCL domain containing 2
EBI3	Epstein-Barr virus induced 3
EDN1	endothelin 1
EIF2AK2	eukaryotic translation initiation factor 2 alpha kinase 2
EMP3	epithelial membrane protein 3
ADGRE1	adhesion G protein-coupled receptor E1
EREG	epiregulin
F3	coagulation factor III, tissue factor
FFAR2	free fatty acid receptor 2
FPR1	formyl peptide receptor 1
FZD5	frizzled class receptor 5
GABBR1	gamma-aminobutyric acid type B receptor subunit 1
GCH1	GTP cyclohydrolase 1
GNA15	G protein subunit alpha 15
GNAI3	G protein subunit alpha i3
GP1BA	glycoprotein Ib platelet subunit alpha
GPC3	glypican 3
GPR132	G protein-coupled receptor 132
GPR183	G protein-coupled receptor 183
HAS2	hyaluronan synthase 2
HBEGF	heparin binding EGF like growth factor
HIF1A	hypoxia inducible factor 1 subunit alpha
HPN	hepsin
HRH1	histamine receptor H1
ICAM1	intercellular adhesion molecule 1
ICAM4	intercellular adhesion molecule 4
ICOSLG	inducible T cell costimulator ligand
IFITM1	interferon induced transmembrane protein...
IFNAR1	interferon alpha and beta receptor subun...
IFNGR2	interferon gamma receptor 2
IL10	interleukin 10
IL10RA	interleukin 10 receptor subunit alpha
IL12B	interleukin 12B
IL15	interleukin 15
IL15RA	interleukin 15 receptor subunit alpha

IL18	interleukin 18
IL18R1	interleukin 18 receptor 1
IL18RAP	interleukin 18 receptor accessory protein
IL1A	interleukin 1 alpha
IL1B	interleukin 1 beta
IL1R1	interleukin 1 receptor type 1
IL2RB	interleukin 2 receptor subunit beta
IL4R	interleukin 4 receptor
IL6	interleukin 6
IL7R	interleukin 7 receptor
CXCL8	C-X-C motif chemokine ligand 8
INHBA	inhibin subunit beta A
IRAK2	interleukin 1 receptor associated kinase 2
IRF1	interferon regulatory factor 1
IRF7	interferon regulatory factor 7
ITGA5	integrin subunit alpha 5
ITGB3	integrin subunit beta 3
ITGB8	integrin subunit beta 8
KCNA3	potassium voltage-gated channel subfamily A member 3
KCNJ2	potassium inwardly rectifying channel subfamily J member 2
KCNMB2	potassium calcium-activated channel subfamily M regulatory beta subunit 2
KIF1B	kinesin family member 1B
KLF6	Kruppel like factor 6
LAMP3	lysosomal associated membrane protein 3
LCK	LCK proto-oncogene, Src family tyrosine kinase
LCP2	lymphocyte cytosolic protein 2
LDLR	low density lipoprotein receptor
LIF	LIF interleukin 6 family cytokine
LPAR1	lysophosphatidic acid receptor 1
LTA	lymphotoxin alpha
LY6E	lymphocyte antigen 6 family member E
LYN	LYN proto-oncogene, Src family tyrosine kinase
MARCO	macrophage receptor with collagenous structure
MEFV	MEFV innate immunity regulator, pyrin
MEP1A	meprin A subunit alpha
MET	MET proto-oncogene, receptor tyrosine kinase
MMP14	matrix metalloproteinase 14
MSR1	macrophage scavenger receptor 1
MXD1	MAX dimerization protein 1
MYC	MYC proto-oncogene, bHLH transcription factor
NAMPT	nicotinamide phosphoribosyltransferase
NDP	norrin cystine knot growth factor NDP
NFKB1	nuclear factor kappa B subunit 1
NFKBIA	NFKB inhibitor alpha

NLRP3	NLR family pyrin domain containing 3
NMI	N-myc and STAT interactor
NMUR1	neuromedin U receptor 1
NOD2	nucleotide binding oligomerization domain containing 2
NPFFR2	neuropeptide FF receptor 2
OLR1	oxidized low density lipoprotein receptor 1
OPRK1	opioid receptor kappa 1
OSM	oncostatin M
OSMR	oncostatin M receptor
P2RX4	purinergic receptor P2X 4
P2RX7	purinergic receptor P2X 7
P2RY2	purinergic receptor P2Y2
PCDH7	protocadherin 7
PDE4B	phosphodiesterase 4B
PDPN	podoplanin
PIK3R5	phosphoinositide-3-kinase regulatory subunit 5
PLAUR	plasminogen activator, urokinase receptor
PROK2	prokineticin 2
PSEN1	presenilin 1
PTAFR	platelet activating factor receptor
PTGER2	prostaglandin E receptor 2
PTGER4	prostaglandin E receptor 4
PTGIR	prostaglandin I2 receptor
PTPRE	protein tyrosine phosphatase receptor type E
PVR	PVR cell adhesion molecule
RAF1	Raf-1 proto-oncogene, serine/threonine kinase
RASGRP1	RAS guanyl releasing protein 1
RELA	RELA proto-oncogene, NF-kB subunit
RGS1	regulator of G protein signaling 1
RGS16	regulator of G protein signaling 16
RHOG	ras homolog family member G
RIPK2	receptor interacting serine/threonine kinase 2
RNF144B	ring finger protein 144B
ROS1	ROS proto-oncogene 1, receptor tyrosine kinase
RTP4	receptor transporter protein 4
SCARF1	scavenger receptor class F member 1
SCN1B	sodium voltage-gated channel beta subunit 1
SELE	selectin E
SELL	selectin L
SELENOS	selenoprotein S
SEMA4D	semaphorin 4D
SERPINE1	serpin family E member 1
SGMS2	sphingomyelin synthase 2
SLAMF1	signaling lymphocytic activation molecule family member 1

SLC11A2	solute carrier family 11 member 2
SLC1A2	solute carrier family 1 member 2
SLC28A2	solute carrier family 28 member 2
SLC31A1	solute carrier family 31 member 1
SLC31A2	solute carrier family 31 member 2
SLC4A4	solute carrier family 4 member 4
SLC7A1	solute carrier family 7 member 1
SLC7A2	solute carrier family 7 member 2
SPHK1	sphingosine kinase 1
SRI	sorcin
STAB1	stabilin 1
TACR1	tachykinin receptor 1
TACR3	tachykinin receptor 3
TAPBP	TAP binding protein
TIMP1	TIMP metalloproteinase inhibitor 1
TLR1	toll like receptor 1
TLR2	toll like receptor 2
TLR3	toll like receptor 3
TNFAIP6	TNF alpha induced protein 6
TNFRSF1B	TNF receptor superfamily member 1B
TNFRSF9	TNF receptor superfamily member 9
TNFSF10	TNF superfamily member 10
TNFSF15	TNF superfamily member 15
TNFSF9	TNF superfamily member 9
TPBG	trophoblast glycoprotein
VIP	vasoactive intestinal peptide

Table S2 The 263 chemotherapy drugs of FDA approved or on clinical trials

Drug name		
Curcumin	Nandrolone phenpropionate	Erlotinib
Chelerythrine	Testolactone	Fulvestrant
3-Bromopyruvate (acid)	Mithramycin	Celecoxib
Cordycepin	Pipobroman	Zoledronate
Benzimate	Cyclophosphamide	Belinostat
Pimozide	Mitomycin	Lapatinib
Elesclomol	Floxuridine	Irinotecan
Wortmannin	Hydroxyurea	Dasatinib
geldanamycin analog	Uracil mustard	Everolimus
Elliptinium Acetate	Dexamethasone Decadron	Pazopanib
Tricirbine phosphate	Dacarbazine	Imatinib
BEN	Dacarbazine	Lapatinib
Amonafide	Vinblastine	Nelfinavir
Batracylin	Acetalax	Nilotinib

Buthionine sulphoximine	Cytarabine	Olaparib
Tanespimycin	Vincristine	Ixabepilone
8-Chloro-adenosine	Megestrol acetate	Raloxifene
Hypothemycin	tfdu	Abiraterone
Fostamatinib	Procarbazine	Abiraterone
Pyrazoloacridine	Lomustine	Sunitinib
Fenretinide	Daunorubicin	Afatinib
Dolastatin 10	Daunorubicin	Pazopanib
Staurosporine	Streptozocin	Olaparib
Pyrazoloacridine	Calusterone	Depsipeptide
Lapachone	Estramustine	Pralatrexate
O-6-Benzylguanine	Vinblastine	Pemetrexed
7-Hydroxystaurosporine	Fluphenazine	Vismodegib
7-Hydroxystaurosporine	Arsenic trioxide	Actinomycin D
Perifosine	Azacitidine	Mitomycin
Alvocidib	Cladribine	Lenvatinib
Midostaurin	Mithramycin	Nelarabine
XK-469	Asparaginase	Crizotinib
Triapine	Ifosfamide	Daunorubicin
kahalide f	Acetalax	Digoxin
okadaic acid	Fludarabine	Ethinyl estradiol
PD-98059	Cisplatin	Fluorouracil
Epothilone B	Isotretinoin	Nitrogen mustard
Amino flavone	Teniposide	Melphalan
BN-2629	Doxorubicin	6-Mercaptopurine
LY-294002	Fludarabine	Tyrothricin
RH1	Bleomycin	Vinblastine
XK-469	Paclitaxel	Cabozantinib
5-fluoro deoxy uridine 10mer	Decitabine	Axitinib
Seliciclib	Mitomycin	Etoposide
Entinostat	Bendamustine	Azacitidine
Alvespimycin	Etoposide	Floxuridine
7-Tert-butyl dimethylsilyl-10-hydroxycamptothecin	Homoharringtonine	Trametinib
Karenitecin	Mithramycin	Palbociclib
PX-316	Tegafur	Carfilzomib
AFP464	Parthenolide	Homoharringtonine
Rebimastat	Dexrazoxane	Ixazomib citrate
Imexon	Tamoxifen	Teniposide
E-7820	Pentostatin	Ponatinib
LMP-400	Rapamycin	Bleomycin
LMP776	Carboplatin	Paclitaxel
Lifiguat	Valrubicin	Rapamycin
SR16157	Idarubicin	Teniposide

Dimethylaminoparthenolide	Epirubicin	Simvastatin
Selumetinib	Oxaliplatin	Belinostat
BML-277	Mitoxantrone	Doxorubicin
Obatoclax	Cytarabine	Vincristine
AT-13387	Mitoxantrone	Pipamperone
Salinomycin	Fludarabine	Epirubicin
Itraconazole	Imiquimod	Idelalisib
XL-147	Carmustine	Topotecan
Hydrastinine HCl	Mithramycin	Arsenic trioxide
1st Precursor Intermediate to TDP 665759	Rapamycin	6-Mercaptopurine
(+)-JQ1	Clofarabine	Docetaxel
Fenretinide	Vinorelbine	Vorinostat
AP-26113	Topotecan	Gefitinib
By-Product of CUDC-305	Gemcitabine	Clofarabine
LOR-253	bisacodyl, active ingredient of viraplex	Dasatinib
Pelitrexol	Irinotecan	Irinotecan
Cobimetinib (isomer 1)	Docetaxel	Vinorelbine
Bafetinib	Depsipeptide	Vandetanib
Methotrexate	Simvastatin	Cabozantinib
6-Mercaptopurine	Raltitrexed	Panobinostat
6-Mercaptopurine	7-Ethyl-10-hydroxycamptothecin	Sonidegib
Nitrogen mustard	Bortezomib	Vemurafenib
Allopurinol	Irofulven	Ibrutinib
Actinomycin D	Temsirolimus	Alectinib
Chlorambucil	Denileukin Difitox Ontak	Dabrafenib
Thiotepa	Pemetrexed	Bosutinib
Melphalan	Vorinostat	ABT-199
Triethylenemelamine	Estramustine	LDK-378
Dromostanolone Propionate	Arsenic trioxide	LDK-378
Acrichine	Eribulin mesilate	AZD-9291
Fluorouracil	Gefitinib	

Table S3 The primers of ten-prognostic genes

ID	sequences
CCL20 F:	TGCTGTACCAAGAGTTTGCTC
CCL20 R:	CGCACACAGACAACCTTTTCTTT
CD69 F:	ATTGTCCAGGCCAATACACATT
CD69 R:	CCTCTCTACCTGCGTATCGTTTT
CD70 F:	GCTTTGGTCCCATTGGTCG
CD70 R:	CGTCCCACCCAAGTGACTC
DCBLD2 F:	ATGTGGACACACTGTACTAGGC
DCBLD2 R:	CTGTTGGGATAGGTCTGTGGG
MEP1A F:	GCTTGGACCTCTTTCAAGGGG

MEP1A R: GACGGAACATCTCAAAGGCAT
MMP14 F: CGAGGTGCCCTATGCCTAC
MMP14 R: CTCGGCAGAGTCAAAGTGG
PCDH7 F: GGATCGGGTGAGGTGACTTTC
PCDH7 R: GTTCTCGTCGAAGATCATCTGAC
PIK3R5 F: CTTCCACGCTACGTGTTGTG
PIK3R5 R: TGAAGTTTGAAGAACCGTGTGAG
RNF144B F: CTGGTAGGCTCCACTATCTCG
RNF144B R: GGGCAAGTGATGGGAGACC
BTG2 F: ACGGGAAGGGAACCGACAT
BTG2 R: CAGTGGTGTGTTGTAGTGCTCTG

Table S4 Protein antibody stock number

Protein names	Antibody stock number
BTG2	ab85051
CCRL2	ab88632
CD69	ab233396
DCBLD2	ab115451
MAP1A	ab184349
MMP14	ab51074
PCDH7	ab139274
PIK3R5	HPA052247
RNF144B	HPA054127
VIP	ab8556