

Supplementary material

Table S1. The antibodies, clones, dilutions, pretreatment conditions, and sources used for IHC.

Antigen	Clone	Dilution	Antigen Retrieval	Source
Brachyury	Polyclonal	1:50	HIER	SantaCruz
Pan CK	MNF 116	1:100	P 8 min IView DAB	Dako
EMA	E29	1:200	P 8 min IView DAB	Dako
S-100	Polyclonal	1:2000	P 12 min IView DAB	Dako
Vimentin	V9	Ready to use	Dako Real Detection System Peroxidase/DAB+	Linaris

Table S2. Gene list (Illumina, TruSeq Amplicon Cancer Panel).

Genes	Number of Amplicons	Position (Start .. End)
ABL1	5	133738302..133738491, 133747476..133747664, 133748157..133748327, 133748277..133748457, 133750328..133750516
AKT1	1	105246429..105246600
ALK	2	29432636..29432822, 29443667..29443836
APC	11	112173887..112174071, 112174603..112174775, 112175034..112175208, 112175128..112175297, 112175216..112175386, 112175306..112175475, 112175394..112175566, 112175512..112175683, 112175630..112175799, 112175740..112175911, 112175854..112176042
ATM	16	108117817..108117989, 108119793..108119963, 108123513..108123683, 108137939..108138126, 108155104..108155281, 108170442..108170618, 108172391..108172571, 108173612..108173801, 108180915..108181101, 108200926..108201096, 108204651..108204823, 108205739..108205928, 108206566..108206750, 108218061..108218247, 108225562..108225751, 108236058..108236241
BRAF	2	140453093..140453267, 140481369..140481545
CDH1	3	68835613..68835782, 68846109..68846283, 68847246..68847422
CDKN2A1	1	21971123..21971308
CSF1R	2	149433616..149433799, 149453016..149453189
CTNNB1	1	41266010..41266180
EGFR	8	55211052..55211238, 55221792..55221964, 55233019..55233203, 55241649..55241827, 55242388..55242576, 55248879..55249052, 55249003..55249178, 55259486..55259662
ERBB2	3	37880191..37880361, 37880963..37881151, 37881298..37881482
ERBB4	8	212288912..212289100, 212530036..212530210, 212576821..212576990, 212578315..212578499, 212587115..212587285, 212589783..212589957, 212652706..212652876, 212812127..212812311
FBXW7	5	153245416..153245604, 153247248..153247417, 153249338..153249520, 153250853..153251031, 153258953..153259142
FGFR1	2	38282183..38282360, 38285908..38286090
FGFR2	5	123258006..123258184, 123274746..123274930, 123279385..123279555, 123279471..123279640, 123279587..123279769
FGFR3	5	1803538..1803712, 1806091..1806277, 1807836..1808025, 1808295..1808464, 1808921..1809105
FLT3	4	28592590..28592766, 28602295..28602464, 28608214..28608402, 28610098..28610267
GNA11	7	3114824..3115004, 3114958..3115133, 3118802..3118989, 3119208..3119395, 3120865..3121035, 3120985..3121170, 3121121..3121304
GNAQ	10	80412406..80412592, 80409249..80409421, 80409335..80409510, 80409459..80409639, 80343306..80343476, 80343392..80343561, 80343504..80343689, 80336110..80336280, 80336204..80336374, 80336320..80336495
GNAS	1	57484390..57484560
HNF1A	2	121431385..121431558, 121432042..121432221
HRAS	2	533843..534021, 534251..534434
IDH1	1	209113084..209113264
JAK2	1	5073737..5073923
JAK3	2	17945666..17945840, 17947981..17948169
KDR	9	55945984..55946155, 55946098..55946284, 55953777..55953965, 55955085..55955257, 55960959..55961129, 55962477..55962653, 55972936..55973106, 55979595..55979775, 55980320..55980496
KIT	10	55561736..55561913, 55592155..55592341, 55593342..55593512, 55593436..55593609, 55593556..55593739, 55594193..55594380, 55595493..55595675, 55597467..55597652, 55599290..55599472, 55602666..55602850
KRAS	3	25378532..25378717, 25380245..25380427, 25398225..25398414
MET	5	116339614..116339792, 116340234..116340420, 116411958..116412127, 116417431..116417620, 116423385..116423555
MLH1	1	37067212..37067394

MPL	1	43814982..43815163
NOTCH1	2	139397740..139397928, 139399316..139399485
NPM1	1	170837493..170837677
NRAS	2	115256500..115256680, 115258702..115258884
PDGFRA	4	55140981..55141157, 55144120..55144306, 55144519..55144703, 55152012..55152184
PIK3CA	7	178916836..178917024, 178921525..178921709, 178927906..178928082, 178936044..178936214, 178938832..178939004, 178951881..178952054, 178951999..178952184
PTEN	7	89624214..89624388, 89685275..89685459, 89711865..89712039, 89717489..89717668, 89717615..89717801, 89720684..89720870, 89720814..89720991
PTPN11	2	112888135..112888323, 112926856..112927032
RB1	8	48919156..48919336, 48923120..48923296, 48942655..48942826, 48955504..48955684, 49027112..49027288, 49033813..49033989, 49037815..49037985, 49039132..49039304
RET	5	43609048..43609226, 43609902..43610075, 43613810..43613998, 43615533..43615703, 43617388..43617564
SMAD4	8	48575131..48575301, 48581168..48581346, 48584528..48584714, 48586234..48586416, 48591796..48591982, 48593377..48593547, 48602998..48603168, 48604638..48604808
SMARCB1	4	24133939..24134126, 24143210..24143383, 24145552..24145726, 24176324..24176495
SMO	5	128845073..128845257, 128846010..128846194, 128846348..128846536, 128850311..128850499, 128851563..128851734
SRC	1	36031734..36031923
STK11	4	1206993..1207169, 1220459..1220638, 1221232..1221407, 1223035..1223221
TP53	10	7573977..7574147, 7576996..7577166, 7577495..7577683, 7578064..7578234, 7578156..7578325, 7578246..7578415, 7578346..7578515, 7578468..7578645, 7579324..7579507, 7579852..7580032
VHL	3	10183769..10183952, 10188217..10188401, 10191450..10191634