

MOMA Cancerpanel v3 (2019-07-01), 106 genes

Approved symbol	Approved name	HGNC ID	Location	Disease panel
ABRAXAS1	family with sequence similarity 175 member A	HGNC:25829	4q21.23	cancer
AIP	aryl hydrocarbon receptor interacting protein	HGNC:358	11q13.2	cancer: MEN1
AKT1	AKT serine/threonine kinase 1	HGNC:391	14q32.33	cancer
AP2S1	adaptor related protein complex 2 sigma 1 subunit	HGNC:565	19q13.32	MEN1
APC	APC, WNT signaling pathway regulator	HGNC:583	5q22.2	cancer: APC, FAP
ATM	ATM serine/threonine kinase	HGNC:795	11q22.3	cancer:other breast/ovary cancer
ATR	ATR serine/threonine kinase	HGNC:882	3q23	cancer
AXIN2	axin 2	HGNC:904	17q24.1	cancer: CRC disposition
BAP1	BRCA1 associated protein 1	HGNC:950	3p21.1	cancer: kidney cancer
BARD1	BRCA1 associated RING domain 1	HGNC:952	2q35	cancer
BLM	Bloom syndrome RecQ like helicase	HGNC:1058	15q26.1	cancer
BMPR1A	bone morphogenetic protein receptor type 1A	HGNC:1076	10q23.2	cancer: CRC disposition, polyposis
BRCA1	BRCA1, DNA repair associated	HGNC:1100	17q21.31	cancer: BRCA, breast cancer, ovary cancer
BRCA2	BRCA2, DNA repair associated	HGNC:1101	13q13.1	cancer: BRCA, breast cancer, ovary cancer
BRIP1	BRCA1 interacting protein C-terminal helicase 1	HGNC:20473	17q23.2	cancer: ovary
BUB1	BUB1 mitotic checkpoint serine/threonine kinase	HGNC:1148	2q13	cancer
BUB3	BUB3, mitotic checkpoint protein	HGNC:1151	10q26.13	cancer
CASR	calcium sensing receptor	HGNC:1514	3q21.1	cancer: MEN1
CDC73	cell division cycle 73	HGNC:16783	1q31.2	cancer: MEN1
CDH1	cadherin 1	HGNC:1748	16q22.1	cancer: breast cancer
CDK4	cyclin dependent kinase 4	HGNC:1773	12q14.1	cancer
CDKN1A	cyclin dependent kinase inhibitor 1A	HGNC:1784	6p21.2	cancer: MEN1
CDKN1B	cyclin dependent kinase inhibitor 1B	HGNC:1785	12p13.1	cancer: MEN1
CDKN2A	cyclin dependent kinase inhibitor 2A	HGNC:1787	9p21.3	cancer
CDKN2B	cyclin dependent kinase inhibitor 2B	HGNC:1788	9p21.3	cancer: MEN1

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CDKN2C	cyclin dependent kinase inhibitor 2C	HGNC:1789	1p32.3	cancer: MEN1
CHEK1	checkpoint kinase 1	HGNC:1925	11q24.2	cancer
CHEK2	checkpoint kinase 2	HGNC:16627	22q12.1	cancer:other breast/ovary cancer
CTNNA1	catenin alpha 1	HGNC:2509	5q31.2	cancer
CTNNB1	catenin beta 1	HGNC:2514	3p22.1	cancer
ENG	endoglin	HGNC:3349	9q34.11	cancer: CRC disposition, polyposis
EPAS1	endothelial PAS domain protein 1	HGNC:3374	2p21	cancer
EPCAM	epithelial cell adhesion molecule	HGNC:11529	2p21	cancer: CRC disposition, ovary cancer, Lynch syndrome
EXO1	exonuclease 1	HGNC:3511	1q43	cancer
FAN1	FANCD2 and FANCI associated nuclease 1	HGNC:29170	15q13.3	cancer
FANCC	Fanconi anemia complementation group C	HGNC:3584	9q22.32	cancer
FANCM	Fanconi anemia complementation group M	HGNC:23168	14q21.2	cancer: other breast/ovary cancer
FH	fumarate hydratase	HGNC:3700	1q43	cancer: kidney
FLCN	folliculin	HGNC:27310	17p11.2	cancer: kidney
GALNT12	polypeptide N-acetylgalactosaminyltransferase 12	HGNC:19877	9q22.33	cancer
GEN1	GEN1, Holliday junction 5' flap endonuclease	HGNC:26881	2p24.2	cancer: other breast/ovary cancer
GNA11	G protein subunit alpha 11	HGNC:4379	19p13.3	cancer: MEN1
GNAS	GNAS complex locus	HGNC:4392	20q13.32	cancer: MEN1
HOXB13	homeobox B13	HGNC:5112	17q21.32	cancer
MAX	MYC associated factor X	HGNC:6913	14q23.3	cancer
MEN1	menin 1	HGNC:7010	11q13	cancer: MEN1
MET	MET proto-oncogene, receptor tyrosine kinase	HGNC:7029	7q31	cancer: kidney
MITF	melanogenesis associated transcription factor	HGNC:7105	3p13	cancer
MLH1	mutL homolog 1	HGNC:7127	3p22.2	cancer: CRC disposition, Lynch syndrome, ovary cancer
MLH3	mutL homolog 3	HGNC:7128	14q24.3	cancer: Lynch syndrome

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MRE11	MRE11 homolog, double strand break repair nuclease	HGNC:7230	11q21	cancer: other breast/ovary cancer
MSH2	mutS homolog 2	HGNC:7325	2p21-p16.3	cancer: CRC disposition, Lynch syndrome, ovary cancer
MSH3	mutS homolog 3	HGNC:7326	5q14.1	cancer: CRC disposition, Lynch syndrome
MSH6	mutS homolog 6	HGNC:7329	2p16.3	cancer: CRC disposition, Lynch syndrome, ovary cancer
MUTYH	mutY DNA glycosylase	HGNC:7527	1p34.1	cancer: CRC disposition, FAP
NBN	nibrin	HGNC:7652	8q21.3	cancer: other breast/ovary cancer
NF1	neurofibromin 1	HGNC:7765	17q11.2	cancer: neurofibromatosis
NF2	neurofibromin 2	HGNC:7773	22q12.2	cancer: neurofibromatosis
NTHL1	nth like DNA glycosylase 1	HGNC:8028	16p13.3	cancer: CRC disposition
NTRK1	neurotrophic receptor tyrosine kinase 1	HGNC:8031	1q23.1	cancer: MEN1
OGG1	8-oxoguanine DNA glycosylase	HGNC:8125	3p25.3	cancer
PALB2	partner and localizer of BRCA2	HGNC:26144	16p12.2	cancer: breast cancer
PIK3CA	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha	HGNC:8975	3q26.32	cancer: other breast/ovary cancer
PMS1	PMS1 homolog 1, mismatch repair system component	HGNC:9121	2q32.2	cancer
PMS2	PMS1 homolog 2, mismatch repair system component	HGNC:9122	7p22.1	cancer: CRC disposition, Lynch syndrome
POLD1	DNA polymerase delta 1, catalytic subunit	HGNC:9175	19q13.3	cancer: CRC disposition
POLE	DNA polymerase epsilon, catalytic subunit	HGNC:9177	12q24.33	cancer: CRC disposition
POLE2	DNA polymerase epsilon 2, accessory subunit	HGNC:9178	14q21.3	cancer
POT1	protection of telomeres 1	HGNC:17284	7q31.33	cancer
PPM1D	protein phosphatase, Mg2+/Mn2+ dependent 1D	HGNC:9277	17q23.3	cancer: other breast/ovary cancer
PRKAR1A	protein kinase cAMP-dependent type I regulatory subunit alpha	HGNC:9388	17q24.2	cancer: MEN1
PTCH1	patched 1	HGNC:9585	9q22.32	cancer: Gorlin syndrome
PTCH2	patched 2	HGNC:9586	1p34.1	cancer: Gorlin syndrome
PTEN	phosphatase and tensin homolog	HGNC:9588	10q23.31	cancer: CRC disposition, breast cancer
RAD50	RAD50 double strand break repair protein	HGNC:9816	5q31.1	cancer

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RAD51	RAD51 recombinase	HGNC:9817	15q15.1	cancer
RAD51B	RAD51 paralog B	HGNC:9822	14q24.1	cancer
RAD51C	RAD51 paralog C	HGNC:9820	17q22	cancer: ovary
RAD51D	RAD51 paralog D	HGNC:9823	17q12	cancer: ovary
RB1	RB transcriptional corepressor 1	HGNC:9884	13q14.2	cancer
RET	ret proto-oncogene	HGNC:9967	10q11.21	cancer: MEN1
RINT1	RAD50 interactor 1	HGNC:21876	7q22.3	cancer: other breast/ovary cancer
RPS20	ribosomal protein S20	HGNC:10405	8q12.1	cancer
SDHA	succinate dehydrogenase complex flavoprotein subunit A	HGNC:10680	5p15.33	cancer: kidney cancer
SDHAF2	succinate dehydrogenase complex assembly factor 2	HGNC:26034	11q12.2	cancer: kidney cancer
SDHB	succinate dehydrogenase complex iron sulfur subunit B	HGNC:10681	1p36.13	cancer: MEN1, kidney cancer
SDHC	succinate dehydrogenase complex subunit C	HGNC:10682	1q23.3	cancer: MEN1, kidney cancer
SDHD	succinate dehydrogenase complex subunit D	HGNC:10683	11q23	cancer: MEN1
SEMA4A	semaphorin 4A	HGNC:10729	1q22	cancer
SLX4	SLX4 structure-specific endonuclease subunit	HGNC:23845	16p13.3	cancer
SMAD4	SMAD family member 4	HGNC:6770	18q21.2	cancer: CRC disposition
SMARCA4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4	HGNC:11100	19p13.2	cancer
SMO	smoothed, frizzled class receptor	HGNC:11119	7q32.1	cancer
SPINK1	serine peptidase inhibitor, Kazal type 1	HGNC:11244	5q32	cancer
SPRED1	sprouty related EVH1 domain containing 1	HGNC:20249	15q14	cancer: NF
STK11	serine/threonine kinase 11	HGNC:11389	19p13.3	cancer: Peutz-Jegher syndrome, CRC disposition, breast cancer
SUFU	SUFU negative regulator of hedgehog signaling	HGNC:16466	10q24.32	cancer: Gorlin syndrome
TMEM127	transmembrane protein 127	HGNC:26038	2q11.2	cancer
TP53	tumor protein p53	HGNC:11998	17p13.1	cancer: Li-Fraumeni syndrome, breast cancer
TP53BP1	tumor protein p53 binding protein 1	HGNC:11999	15q15.3	cancer

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TSC1	tuberous sclerosis 1	HGNC:12362	9q34	cancer
TSC2	tuberous sclerosis 2	HGNC:12363	16p13.3	cancer
UIMC1	ubiquitin interaction motif containing 1	HGNC:30298	5q35.2	cancer
VHL	von Hippel-Lindau tumor suppressor	HGNC:12687	3p25.3	cancer: MEN1, kidney
XRCC2	X-ray repair cross complementing 2	HGNC:12829	7q36.1	cancer
XRCC3	X-ray repair cross complementing 3	HGNC:12830	14q32.3	cancer