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Cancer Gene List - II

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Abstract: There are thousands of genes that are related to the cancer development. This article gives the genes that are supposed as cancer genes. This is cancer gene list part 2.

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Key words: cancer; gene; DNA; life; medicine

Cell proliferation is regulated during the body growth and the cancer could happen if the regulation is out of control. Viruses can be used to introduce the reprogramming factors into adult cells. However, there is a risk that the virus used to introduce the stem cell factors sometimes possibly causes cancers. Controlling genes on and off is central to the biological process. The most serious medical conditions, such as cancer and birth defects, are due to abnormal cell division and differentiation. Cancer cell lines can be used to find potential anti-tumor drugs. To control the differentiation of stem cell precisely is important in the drug development (Ma, et al, 2014).

There are thousands of genes that are related to the cancer development. Here it gives 1400 genes that are supposed as cancer genes (Table 1) (Atlas of Genetics and Cytogenetics in Oncology and Haematology., 2015). HGNC is responsible for

approving unique symbols and names for human loci, including protein coding genes, ncRNA genes and pseudogenes, to allow unambiguous scientific communication. The HUGO Gene Nomenclature Committee is the only worldwide authority that assigns standardised nomenclature to human genes. The HGNC approves both a short-form abbreviation known as a gene symbol, and also a longer and more descriptive name. Each symbol is unique and the committee ensures that each gene is only given one approved gene symbol. This allows for clear and unambiguous reference to genes in scientific communications, and facilitates electronic data retrieval from databases and publications. In preference, symbols also maintain parallel construction for different members of a gene family and can also be used for orthologous genes in other vertebrate species (HGNC, 2015).

Table 1. Cancer gene list (3)

Gene	Location	HGNC (Hugo) Name
D0S117E (Alias)	5q35.3	DBN1
D10S170 (Alias)	10q21.2	CCDC6
D11S812E (Alias)	11p13	PAX6
D12S2489E (Alias)	12p13.2	KLRK1
D14Ertd420e (Alias)	3p21.1	PRKCD
D2 (Alias)	14q31.1	DIO2
D3F15S2 (Alias)	3p21.31	MST1
D40 (Alias)	15q15.1	CASC5
D52 (Alias)	8q21.13	TPD52
D9S46E (Alias)	9q34.13	NUP214
DAB-2 (Alias)	5p13.1	DAP2IP
DAB2	5p13.1	DAP2IP (disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila))
DAB2IP	9q33.2	DAB2IP (DAB2 interacting protein)
DACAR (Alias)	19q13.33	CARD8

DAGK1 (Alias)	12q13.2	DGKA
DAGK (Alias)	12q13.2	DGKA
DAL-1 (Alias)	18p11.31	EPB41L3
DAL1 (Alias)	18p11.31	EPB41L3
DANCE (Alias)	14q32.12	FBLN5
DAP2IP	5p13.1	DAP2IP (disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila))
DAP6 (Alias)	6p21.32	DAXX
DAPK1	9q21.33	DAPK1 (death-associated protein kinase 1)
DAPK (Alias)	9q21.33	DAPK1
DAP Kinase 1 (Alias)	9q21.33	DAPK1
DARPP-32 (Alias)	17q12	PPP1R1B
DARPP32 (Alias)	17q12	PPP1R1B
DAX-1 (Alias)	Xp21.2	NR0B1
DAX1 (Alias)	Xp21.2	NR0B1
DAXX	6p21.32	DAXX (death-associated protein 6)
DBC-1 (Alias)	8p21.3	KIAA1967
DBC1 (Alias)	8p21.3	KIAA1967
DBC2 (Deleted in breast cancer 2 gene protein) (Alias)	8p21.3	RHOBTB2
DBI-1 (Alias)	13q14.3	INTS6
DBN1	5q35.3	DBN1 (drebrin 1)
DBPB (Alias)	1p34.2	YBX1
DBP-RB (Alias)	2p24.3	DDX1
DCC	18q21.2	DCC (deleted in colorectal carcinoma)
Dcip1 (Alias)	19q13.2	CXCL17
DCR3 (decoy receptor 3) (Alias)	20q13.33	TNFRSF6B
DD3 (Alias)	10p15.1	AKR1C3
DD96 (Alias)	1p33	PDZK1IP1
ddb2 (Alias)	11p11.2	DDB2
DDB2	11p11.2	DDB2 (xeroderma pigmentosum, complementation group E)
DDC	7p12.1	DDC (dopa decarboxylase (aromatic L-amino acid decarboxylase))
DDEF1 (Alias)	8q24.21	ASAP1
DDIT1 (Alias)	1p31.3	GADD45A
DDIT3	12q13.3	DDIT3 (DNA damage inducible transcript 3)
DDIT4	10q22.1	DDIT4 (DNA-damage-inducible transcript 4)
DDR1	6p21.33	DDR1 (discoidin domain receptor tyrosine kinase 1)
DDR (Alias)	6p21.33	DDR1
DDX10	11q22.3	DDX10 DEAD (Asp-Glu-Ala-Asp) box polypeptide 10
DDX1	2p24.3	DDX1 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 1)

DDX25	11q24.2	DDX25 (DEAD (Asp-Glu-Ala-Asp) box helicase 25)
DDX26 (Alias)	13q14.3	INTS6
DDX2B (Alias)	3q27.3	EIF4A2
DDX43	6q13	DDX43 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 43)
DDX5	17q23.3	DDX5 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 5)
DDX9 (Alias)	1q25.3	DHX9
DDXBP1 (Alias)	15q23	PIAS1
DEBT91 (Alias)	2p11.2	KCMF1
DED (Alias)	17q12	AATF
DEFB101 (Alias)	8p23.1	DEFB1
DEFB-1 (Alias)	8p23.1	DEFB1
DEFB1	8p23.1	DEFB1 (defensin, beta 1)
DEK	6p22.3	DEK DEK oncogene)
DEL1 (Alias)	5q14.3	EDIL3
Demethylase (Alias)	18q21.2	MBD2
DENR	12q24.31	DENR (density-regulated protein)
DEP1 (Alias)	11p11.2	PTPRJ
DERMO1 (Alias)	2q37.3	TWIST2
DESRT (Alias)	10q21.2	ARID5B
DFNA48 (Alias)	12q13.3	MYO1A
DFNA64 (Alias)	12q24.31	DIABLO
DFNB10 (deafness, autosomal recessive 10) (Alias)	21q22.3	TMPRSS3
DFNB39 (Alias)	7q21.11	HGF
DFNB8 (deafness, autosomal recessive 8) (Alias)	21q22.3	TMPRSS3
DGKA	12q13.2	DGKA (diacylglycerol kinase, alpha 80kDa)
DGK-alpha (Alias)	12q13.2	DGKA
DHLAG (Alias)	5q32	CD74
DHMN2 (Alias)	12q24.23	HSPB8
DHRD (Alias)	2p16.1	EFEMP1
DHTR (Alias)	Xq12	AR
DHX9	1q25.3	DHX9 (DEAH (Asp-Glu-Ala-His) box polypeptide 9)
DIA4 (Alias)	16q22.1	NQO1
DIABLO	12q24.31	DIABLO (diablo, IAP-binding mitochondrial protein)
DIABLO-S (Alias)	12q24.31	DIABLO
DI (Alias)	17q21.31	SLC4A1
DIAR6 (Alias)	12p12.3	GUCY2C
DICE1 (Alias)	13q14.3	INTS6
Dickkkopf-1 (Alias)	10q21.1	DKK1
DIETER (Alias)	Xp11.23	FOXP3
DIF-2 (Alias)	6p21.33	IER3
DIF2 (Alias)	6p21.33	IER3
DIF (Alias)	6p21.33	TNF

Dig2 (Alias)	10q22.1	DDIT4
DIL-2 (Alias)	20q11.21	TPX2
DIL2 (Alias)	20q11.21	TPX2
DIO2	14q31.1	DIO2 (deiodinase, iodothyronine, type II)
DIP1/2 (Alias)	9q33.2	DAB2IP
DIRA (Alias)	2q13	IL1RN
DIRAS3	1p31.3	DIRAS3 (DIRAS family, GTP-binding RAS-like 3)
DIRC1	2q32.2	DIRC1 (disrupted in renal carcinoma 1)
DIRC2	3q21.1	DIRC2 (disrupted in renal carcinoma 2)
DIRC3	2q35	DIRC3 (disrupted in renal carcinoma 3)
DJ583P15.1.1 (Alias)	20q13.33	TNFRSF6B
DJ79P11.1 (Alias)	Xq22.1	BEX2
DKC1	Xq28	DKC1 (dyskeratosis congenita 1, dyskerin)
DKFZp313G1618 (Alias)	10q22.2	KAT6B
DKFZP434B027 (Alias)	16q24.2	FBXO31
DKFZp434E109 (Alias)	17q23.3	DDX5
DKFZp434H2114 (Alias)	6q13	DDX43
DKFZp434J1815 (Alias)	16q24.2	FBXO31
DKFZp434K0220 (Alias)	17p13.2	TRPV1
DKFZP434L1021 (Alias)	2p11.2	KCMF1
DKFZP434N0250 (Alias)	1q43	AKT3
DKFZp434N231 (Alias)	1p36.31	CHD5
DKFZp434O192 (Alias)	15q14	NUTM1
DKFZp547F068 (Alias)	2q14.3	BIN1
DKFZp547L106 (Alias)	1q22	ARHGEF2
DKFZp547O146 (Alias)	19p13.3	ZBTB7A
DKFZp547P1516 (Alias)	1q22	ARHGEF2
DKFZP564A063 (Alias)	11q13.2	BRMS1
DKFZp566I133 (Alias)	17q23.1	VMP1
DKFZp586C1620 (Alias)	4q21.1	RCHY1
DKFZp586D1519 (Alias)	8p22	MTUS1
DKFZp586F2423 (Alias)	7q33	CREB3L2
DKFZp586O0821 (Alias)	18q21.2	MBD2
DKFZp586O1624 (Alias)	3p14.1	LRIG1
DKFZp586P1322 (Alias)	7q11.23	HSPB1
DKFZp686B01212 (Alias)	11q23.3	TAGLN
DKFZp686B1823 (Alias)	2p15	XPO1
DKFZp686B1993 (Alias)	9q31.3	TXN
DKFZp686B24257 (Alias)	15q25.1	CTSH
DKFZp686E205 (Alias)	4p11	FRYL
DKFZp686F20243 (Alias)	8p22	MTUS1
DKFZp686I1536 (Alias)	1q22	MEF2D
DKFZp686I2148 (Alias)	2q34	MAP2
DKFZp686J01190 (Alias)	17q23.3	DDX5
DKFZp686J1497 (Alias)	4q21.3	PTPN13
DKFZp686J1851 (Alias)	Xq28	RPL10

DKFZp686K02111 (Alias)	7q34	HIPK2
DKFZp686K06110 (Alias)	5q14.2	VCAN
DKFZp686K18126 (Alias)	8p11.22	TACC1
DKFZp686K23225 (Alias)	4q13.3	RASSF6
DKFZp686M0430 (Alias)	6q25.1	AKAP12
DKFZp686N04275 (Alias)	3p21.1	BAP1
DKFZp686N06184 (Alias)	1q31.3	ASPM
DKFZp686O0331 (Alias)	6q25.1	AKAP12
DKFZp686O16152 (Alias)	3q25.2	MME
DKFZp686O19165 (Alias)	7q33	CREB3L2
DKFZp686P11128 (Alias)	11q23.3	TAGLN
DKFZp686P18118 (Alias)	2p21	EML4
DKFZp761F179 (Alias)	1q42.2	EGLN1
DKFZp761K2222 (Alias)	7p15.2	JAZF1
DKFZp761P0818 (Alias)	3q29	DLG1
DKFZp762E1112 (Alias)	10q11.23	NCOA4
DKFZp762L1111 (Alias)	6q13	CD109
DKFZp762O1912 (Alias)	3q11.2	MINA
DKFZp779L0366 (Alias)	19q13.33	CARD8
DKFZp781A095 (Alias)	19q13.43	PEG3
DKFZp781B0426 (Alias)	3q29	DLG1
DKFZp781B0869 (single database entry only) (Alias)	17q24.1	AXIN2
DKFZp781G0451 (Alias)	1p31.3	MIER1
DKFZp781G1938 (Alias)	14q11.2	NDRG2
DKFZp781I035 (Alias)	9q21.33	DAPK1
DKFZp781L1617 (Alias)	1q41	ESRRG
DKFZp781O1747 (Alias)	20p13	RASSF2
DKFZp781P1017 (Alias)	6q24.2	PLAGL1
DKFZp781P1719 (Alias)	9q34.13	RAPGEF1
DKFZp781P2092 (Alias)	20q11.21	BCL2L1
DKK-1 (Alias)	10q21.1	DKK1
DKK1	10q21.1	DKK1 (dickkopf homolog 1 (Xenopus laevis))
DKK3	11p15.3	DKK3 (dickkopf 3 homolog (Xenopus laevis))
DLC1	8p22	DLC1 (deleted in liver cancer 1)
DLC2 (Deleted in Liver Cancer 2) (Alias)	13q13.1	STARD13
DLG1	3q29	DLG1 (discs, large homolog 1 (Drosophila))
DLGH1 (Alias)	3q29	DLG1
DLP1 (Alias)	6q21	PDSS2
DLX2	2q31.1	DLX2 (distal-less homeobox 2)
DLX4	17q21.33	DLX4 (distal-less homeobox 4)
DLX5	7q21.3	DLX5 (distal-less homeobox 5)
DLX6	7q21.3	DLX6 (distal-less homeobox 6)
DLX7 (Alias)	17q21.33	DLX4

DLX8 (Alias)	17q21.33	DLX4
DLX9 (Alias)	17q21.33	DLX4
DMBT1	10q26.13	DMBT1 (Deleted in malignant brain tumors 1)
DMC (Alias)	19q13.2	CXCL17
DMP1 (Alias)	7q21.12	DMTF1
DMTase (Alias)	18q21.2	MBD2
DMTF1	7q21.12	DMTF1 (cyclin D binding myb-like transcription factor 1)
DMTF (Alias)	7q21.12	DMTF1
DNA (Alias)	19p13.2	DNMT1
DNAJA3	16p13.3	DNAJA3 (DnaJ (Hsp40) homolog, subfamily A, member 3)
DNF15S2 (Alias)	3p21.31	MST1
DNMT1	19p13.2	DNMT1 (DNA (cytosine-5-)methyltransferase 1))
DNMT3A2 (Alias)	2p23.3	DNMT3A
DNMT3A	2p23.3	DNMT3A (DNA (cytosine-5-)methyltransferase 3 alpha)
DNMT3B	20q11.21	DNMT3B (DNA (cytosine-5-)methyltransferase 3 beta)
DNMT (Alias)	19p13.2	DNMT1
DOC-2 (Alias)	5p13.1	DAP2IP
DOC2 (Alias)	5p13.1	DAP2IP
DOM (Alias)	22q13.1	SOX10
DOPPEL (Alias)	20p13	PRND
DP5 (Alias)	12q24.22	HRK
DPC4 (Alias)	18q21.2	SMAD4
DPD1 (Alias)	19q13.2	TGFB1
DPL (Alias)	20p13	PRND
DPP4	2q24.2	DPP4 (dipeptidyl-peptidase 4)
DPPIV (Alias)	2q24.2	DPP4
DRAD (Alias)	2p16.1	EFEMP1
DRAL (Alias)	2q12.1	FHL2
DRAM1	12q23.2	DRAM1 (damage-regulated autophagy modulator)
DRAM (Alias)	12q23.2	DRAM1
DRAP-27 (Alias)	12p13.31	CD9
DRCC1 (Alias)	3q21.2	MUC13
DRES-17 (Alias)	1q21.3	PRUNE
DRES17 (Alias)	1q21.3	PRUNE
DRG-1 (Alias)	8q24.22	NDRG1
DRG1 (Alias)	8q24.22	NDRG1
DRP1 (Alias)	12q24.31	DENR
DRP (Alias)	12q24.31	DENR
DRR1 (Alias)	3p14.3	FAM107A
DRY12 (Alias)	7p22.3	GPER1
DSG2	18q12.1	DSG2 (desmoglein 2)
DSS (Alias)	Xp21.2	NR0B1

DT1P1B11 (Alias)	12q21.2	PHLDA1
DT-Diaphorase (Alias)	16q22.1	NQO1
DTK (Alias)	15q15.1	TYRO3
DUG (Alias)	10q25.2	PDCD4
DUP (Alias)	16q24.3	CDT1
DUP (Alias)	5q14.1	MSH3
DUSP10	1q41	DUSP10 (dual specificity phosphatase 10)
DUSP1	5q35.1	DUSP1 (dual specificity phosphatase 1)
DUSP6	12q21.33	DUSP6 (dual specificity phosphatase 6)
DUTT1 (Alias)	3p12.3	ROBO1
DVL1	1p36.33	DVL1 (dishevelled, dsh homolog 1 (Drosophila))
DVL1L1 (Alias)	1p36.33	DVL1
DVL (Alias)	1p36.33	DVL1
DXS1179E (Alias)	3q26.2	PRKCI
DXS648 (Alias)	Xq28	RPL10
DXS648E (Alias)	Xq28	RPL10
DYRK1A	21q22.13	DYRK1A (dual-specificity tyrosine- (Y)-phosphorylation regulated kinase 1A)
DYRK1 (Alias)	21q22.13	DYRK1A
DYRK1B	19q13.2	DYRK1B (dual-specificity tyrosine- (Y)-phosphorylation regulated kinase 1B)
DYRK (Alias)	21q22.13	DYRK1A
DYS14 (Alias)	Yp11.2	TSPY1
DYSAD (Alias)	19q13.12	FXYD5
Dysadherin (Alias)	19q13.12	FXYD5

There are thousands of genes that are related to the cancer development. There are 1400 genes that are supposed as cancer genes (Ma, et al, 2014b).

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