

CGMD: an integrated database of cancer genes and markers

User manual





List of Cancers Alphabetically

- A
- B
- C
- E
- G
- H
- I
- K
- L
- M
- N
- O
- P
- S
- T
- V



Acute Lymphoblastic Leukemia

Acute Myeloid Leukemia

Adrenocortical Carcinoma



Anal Cancer

CANCER GENE DESCRIPTION

ID CGMD01

Cancer Acute Lymphoblastic Leukemia (ALL)

Disease This is a cancer of ALL, too many stem cells become lymphoblasts, B lymphocytes, or T lymphocytes. These cells are also called leukemia cells. These leukemia cells are not able to fight infection very well. Also, as the number of leukemia cells increases in the blood and bone marrow, there is less room for healthy white blood cells, red blood cells, and platelets. This may cause infection, anemia, and easy bleeding. The cancer can also spread to the central nervous system (brain and spinal cord).

Two major types of Leukemias are

1. Child ALL

2. Adult ALL

Precursor B lymphoblastic Leukemia

The t(12;21) translocation that creates the TEL-AML1 fusion gene is the most common genetic lesion in child ALL, occurring in 20-25% of B-lineage cases, less common in adult ALL. In adult B-ALL, in which t(9;22) is identified in approximately 33% of cases. This translocation encoding the BCR-ABL fusion protein is found in only 6% of childhood cases. Precursor T lymphoblastic Leukemia This has severity in 15% of childhood and 25% of adult ALL cases. The DNA lesions in T-ALL can be grouped into four classes: point mutations providing a self-renewal potential (NOTCH1);



list of Cancers Alphabetically

- A**
- B
- C
- E
- G
- H
- I
- K
- L
- M
- N
- O
- P
- S
- T
- V



Acute Lymphoblastic Leukemia

Acute Myeloid Leukemia

Adrenocortical Carcinoma

Anal Cancer



CANCER GENE DESCRIPTION

Acute Lymphoblastic Leukemia

Precursor B lymphoblastic leukemia

BCR-ABL (translocation) 613 25
 BCR-ABL(translocation) 4297 4297
 E2A-PBX1(translocation) 69295067
 c-MYC(translocation) 4609
 TEL-AML1 (translocation)2120861

Precursor T lymphoblastic leukemia

NOTCH1 (mutation) 4851
 TAL1 (overexpression) 6886
 LYL1(expression) 4066
 MLL-ENL(translocation) 4297 4298
 HOX11 (translocation) 3195
 MYC (translocation) 4609
 LMO2 (translocation) 4005
 HOX11L2 (translocation)30012



```
>hsa:613 BCR, ALL, BCR1, CML, D22S11, D22S662, PHL1
breakpoint cluster region (EC:2.7.11.1); K08878 breakpoint cluster region
protein [EC:2.7.11.1] (A) MVDPVGFAEAKKAQFPDSEPPRMELRSVGDIEQELERCKASIRRLLEQEVNQRFRMRYLQ
TLLAKEKESYDRQRWGFRRAAQAPDGAASEPRASASRPQPAPADGADPPPAEPEEARPOGE
GSPGKARPGTARRPQAAAASGERDRGPPASVAALRSNFERIIRKGGQPGADAEKPFYVNVV
EFHMEKGLVKVHDKVSDRTS5LGGQAMQMRKKSQHGAGSSVGDASRPYVGRSFLVSSC
GVGDGYEDAE LNPRFLKDNLIDANGGSRPPWFLEYQPVQSYVVGPHMEGGKPLLRSQ
STSEQRRLTWPRRSYSPRSFEDCGGGYTPDCSSNEHLT5SEEDFSSGQSSRVSPPTTY
RMFRDKSRSPSQNSQSSFDSSPPTPQCHKRHRHC PVVSEAT EVGVRK TGQINPHDGGG
AFHGDADGSGFTPPGYGCAADRAEEQRRHQDGLPYIDDSPPSSPHLSSKGRGSDALVSG
ALESTKASELDLEKGLEHRRKWL VSGILASEETYLSHLEALLLPMKPLKAAATTSQPVLTS
QQIETIFFKVPLEYIHKLEYDGLFFPRVQWSHQQRVGDLFQLASQLGVYRAFVQHYGV
AMEMAEEKCCQMAQFAEISENLRRSRKDKADPPTTKHSLETLLYKFDVRYRSFLVHDL
LKHTPASHPDHPLQDALRISQNF LSSINEEITPRRQSHTVKKGHRQLKDSFHNVLVE
GARKLRHVLF TDLLCTKLKQSGGKTQQYDCKVYIPLTDL SFQHVDE LEAVNIP LVP
DEELDALKIKISQEKNDIQREKRANKGSKATERLKKELSEQESLLLHSPSMARVHRSRN
GKSYTF L ISSDYERAENRNIREQQKCFR5FSLTSVELQMLTNSCVKLQTVMSIPLTIN
KEDDSPGLYGF LNVIVHSATGFKQSSNLYCTLEVD5FGYFVNAKTRVYRDTAEPNWNH
EEETELEGSTLRILCYEKYKTRIPKEDGESTDRLLHGKGGVQLDPQALQDDWQR TVI
APNGIEVKLSVKTNSREFSLKRPMSRKQTVGVEGVKIAVTKREKSVVPIVYRQVEIEH
RGMEVGVYRVSGVATDIQALKAADFVNRKNDVSVH5SENOVNAEAGTKLKYRELPPELF
TDEFPYNF AEGIALSDPVAKESCHLNL LSLPEANL LTFLLDLH LKRAEKEAVNKMSL
HNLATVFGPTLLRPSEKESKLPANPSQPTIHTDSH5LEVMSQVQLLYLQLEIAPAPDS
KRQSI L FSTE V
```




CANCER PATHWAYS

Molecular Descriptions

Cancer Pathways

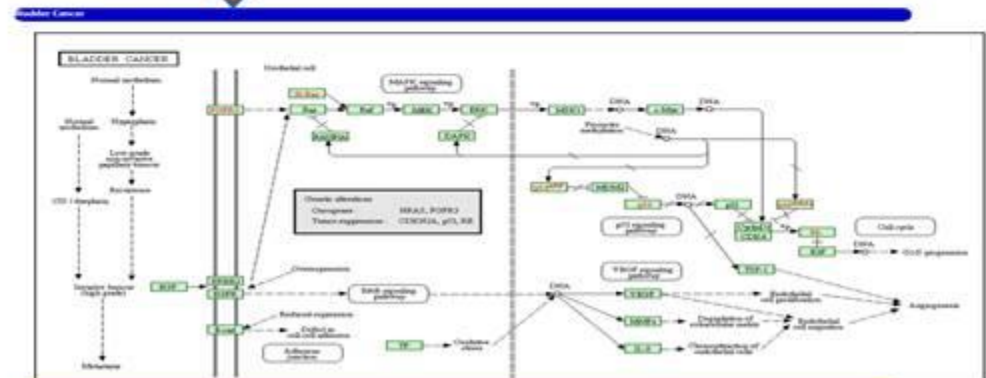
Gene Descriptions

Protein Descriptions

Over Expression of Cancer Markers



- Bladder Cancer
- Brain Tumors
- Breast Cancer
- Chronic Myelogenous Leukemia
- Colorectal Cancer
- Endometrial Cancer
- Melanoma
- Lung Cancer Non-Small Cell
- Lung Cancer Small Cell
- Thyroid Cancer
- Transcriptional Misregulation Cancers
- Viral Carcinogen Pathways



Molecular Descriptions

Cancer Pathways

Gene Descriptions

Protein Descriptions

Over Expression of Cancer Markers

Protein Descriptions

- CGM001 Acute Lymphoblastic Leukemia
- CGM002 Acute Myeloid Leukemia
- CGM003 Adrenocortical Carcinoma
- CGM004 Adult Cancer
- CGM005 Bladder Cancer
- CGM006 Breast Cancer
- CGM007 Cervical Cancer
- CGM008 Chronic Lymphocytic Leukemia (CLL)
- CGM009 Chronic Myelogenous Leukemia
- CGM010 Chronic Myeloid Leukemia
- CGM011 Colorectal Cancer
- CGM012 Endometrial Cancer
- CGM013 Esophageal Cancer
- CGM014 Glioblastoma Cancer
- CGM015 Gastric (Stomach) Cancer
- CGM016 Heavy Chain Leukemia
- CGM017 Hepatocellular (Liver) Cancer, Adult Primary
- CGM018 Hodgkin's lymphoma, Adult
- CGM019 Inlet Cell Tumors, Pancreatic Neuroendocrine Tumors
- CGM020 Kidney Sarcoma
- CGM021 Leukemia (Blood Cell)
- CGM022 Laryngeal Cancer
- CGM023 Lip and Oral Cavity Cancer
- CGM024 Lung Cancer, Non-Small Cell

Protein Descriptions

CGM001 Acute Lymphoblastic Leukemia

Proteinase B Lymphoblastic Leukemia Clones

BCR-ABL (translocation)	HSA-613	36
ABL-AP1 (translocation)	HSA-4287	409
BCR-PI3K (translocation)	HSA-4026	5887
ABL-ABL1 (translocation)	HSA-4026	5887
BCR-ABL1 (translocation)	HSA-2120	961

Proteinase B Lymphoblastic Leukemia Markers

BCR-ABL (translocation)	HSA-613	36
ABL (translocation)	4287	
BCR-PI3K (translocation)	HSA-4026	5887
ABL-ABL1 (translocation)	HSA-4026	5887
BCR-ABL1 (translocation)	HSA-2120	961
CD226A	HSA-973	
CD222	HSA-930	
CD219	HSA-930	
CD210	HSA-4311	
CD226	HSA-931	
CD27	HSA-1791	
CD224	HSA-100133641	
CD11	HSA-7480	

Proteinase T Lymphoblastic Leukemia Clones

HSA-4801	
TAL1 (translocation)	HSA-5998
LIN (translocation)	HSA-4368
HSA-2702 (translocation)	HSA-4207
HSA-3195 (translocation)	HSA-3195
MFG1 (translocation)	HSA-4006
LMNB2 (translocation)	HSA-4005
HSA-30012 (translocation)	HSA-30012

Proteinase T Lymphoblastic Leukemia Markers

CD221 (translocation)	HSA-5195	
CD22	HSA-5195	5195
CD229	HSA-914	
CD26	HSA-921	
CD28	HSA-926	926
CD210	HSA-4311	
CD27	HSA-1791	
CD21	HSA-924	
CD218	HSA-928	
CD118	HSA-7480	

Proteomic Descriptions

KEGG Entry Homo sapiens (human) 613
 Gene Name BCR, ALL, BCR1, CML, D22S11, D22S662, PHL
 Uniprot Entry P11274
 PDB Structures 1K1F
 Active Sites 1K1F
 Family and domain databases InterPro Graphical View P11274
 Pfam Graphical View P11274
 Physical and Chemical Properties ProtParam P11274



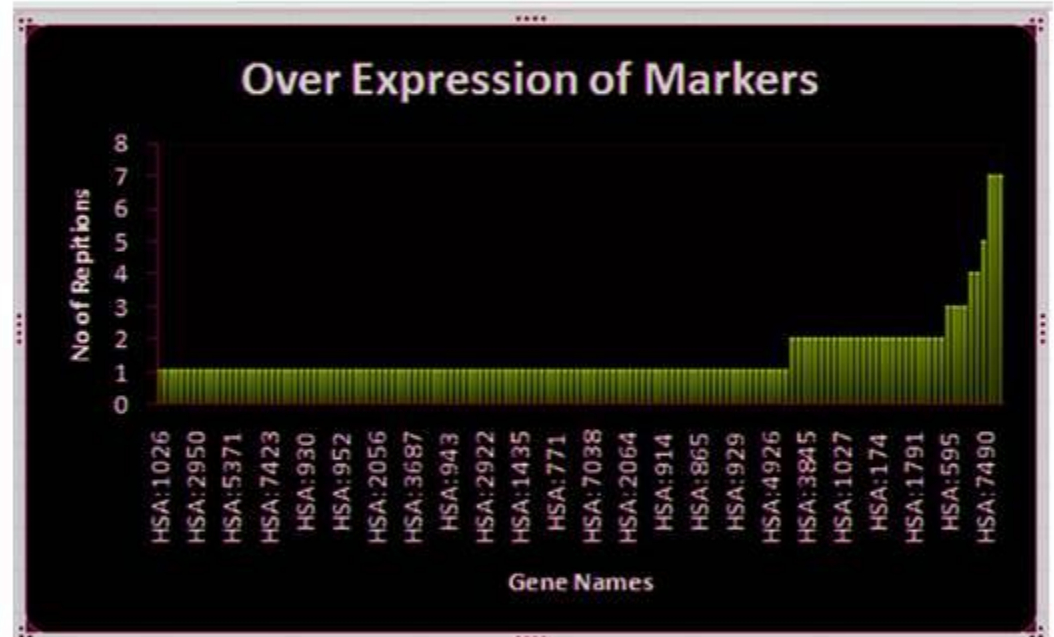
Molecular Descriptions

[Cancer Pathways](#)


[Gene Descriptions](#)

[Protein Descriptions](#)

[Over Expression of Cancer Markers](#)





BLAST® Basic Local Alignment Search Tool My NCBI 
[\[Sign In\]](#) [\[Registered\]](#)



[Home](#) [Recent Results](#) [Saved Strategies](#) [Help](#)

► NCBI BLAST/blastp suite **Standard Protein BLAST**

[blastn](#) [blastp](#) [blastx](#) [tblastn](#) [tblastx](#)


BLASTP programs search protein databases using a protein query. [more...](#) [Reset page](#) [Bookmark](#)

Enter Query Sequence


Enter accession number(s), gi(s), or FASTA sequence(s)  [Clear](#) Query subrange 


From

To


Or, upload file No file chosen 


Job Title


Enter a descriptive title for your BLAST search 

Align two or more sequences 

Choose Search Set

Database 


Organism Exclude  +

Optional
Enter organism common name, binomial, or tax id. Only 20 top taxa will be shown. 

Exclude Models (XM/XP) Uncultured/environmental sample sequences

Optional

Entrez Query [Create custom database](#)

Optional
Enter an Entrez query to limit search 

Program Selection

Algorithm blastp (protein-protein BLAST)
 PSI-BLAST (Position-Specific Iterated BLAST)