

**Table 32. Significantly enriched pathway categories from analysis of the down-regulated genes**

AML vs. normal cells (NBM and purified hematopoietic cells)						
System	Gene category	List hits	List total	Population hits	Population total	EASE score
Chromosome	Homo sapiens 5	29	382	323	6800	1.35E-02
Chromosome	Homo sapiens 5q	25	382	271	6800	1.68E-02
KEGG pathway	Complement andcoagulation cascades	5	42	25	900	2.34E-02
KEGG pathway	Immune system	5	42	25	900	2.34E-02
B lineage ALL vs. normal cells (NBM and purified hematopoietic cells)						
System	Gene category	List hits	List total	Population hits	Population total	EASE score
KEGG pathway	Metabolism of complex lipids	44	249	114	952	2.33E-03
Chromosome	Homo sapiens 11	107	1511	413	7342	5.84E-03
KEGG pathway	Immune system	13	249	25	952	1.39E-02
KEGG pathway	Complement andcoagulation cascades	13	249	25	952	1.39E-02
Chromosome	Homo sapiens 11q	75	1511	285	7342	1.47E-02
KEGG pathway	Oxidative phosphorylation	26	249	67	952	2.36E-02
KEGG pathway	Histidine metabolism	8	249	13	952	2.93E-02
Chromosome	Homo sapiens 19	96	1511	389	7342	3.27E-02
Chromosome	Homo sapiens 3q	56	1511	213	7342	3.54E-02
T cell ALL vs. normal cells (NBM and purified hematopoietic cells)						
System	Gene category	List hits	List total	Population hits	Population total	EASE score
KEGG pathway	Neurodegenerative disorders	19	128	65	917	1.74E-03
Chromosome	Homo sapiens 6	67	858	398	7049	4.57E-03
GenMAPP pathway	TGF beta signaling pathway	9	71	27	608	7.59E-03
KEGG pathway	Alzheimer's disease	8	128	20	917	1.35E-02
KEGG pathway	Immune system	8	128	24	917	3.73E-02
KEGG pathway	Complement andcoagulation cascades	8	128	24	917	3.73E-02
Chromosome	Homo sapiens 6q	28	858	159	7049	4.38E-02
Chromosome	Homo sapiens 6p	39	858	238	7049	4.57E-02
<i>TCF3/PBX1</i> vs. the remaining B lineage ALLs						
System	Gene category	List hits	List total	Population hits	Population total	EASE score
Chromosome	Homo sapiens X	21	196	234	6904	8.56E-06
Chromosome	Homo sapiens Xq	14	196	141	6904	1.62E-04
GenMAPP pathway	G Protein signaling	6	19	38	593	3.84E-03
KEGG pathway	Metabolism of complex carbohydrates	7	26	64	893	6.43E-03
KEGG pathway	Glycosaminoglycandegradation	3	26	6	893	1.05E-02
Chromosome	Homo sapiens 12p	8	196	98	6904	2.05E-02
GenMAPP pathway	GPCRs, Class A rhodopsin-like	4	19	22	593	2.52E-02
Chromosome	Homo sapiens 4	14	196	260	6904	3.22E-02

Chromosome	Homo sapiens Xp	7	196	93	6904	4.73E-02
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*IGH@MYC* vs. the remaining B lineage ALLs

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System	Gene category	List hits	List total	Population hits	Population total	EASE score
Chromosome	Homo sapiens 21q	8	200	88	6904	1.32E-02
Chromosome	Homo sapiens 21	8	200	88	6904	1.32E-02
KEGG pathway	Neurodegenerative disorders	6	22	65	893	1.43E-02
Chromosome	Homo sapiens Xq	10	200	141	6904	2.03E-02

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*ETV6/RUNX1* vs. the remaining B lineage ALLs

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System	Gene category	List hits	List total	Population hits	Population total	EASE score
Chromosome	Homo sapiens X	28	285	234	6904	9.51E-07
Chromosome	Homo sapiens Xp	17	285	93	6904	9.59E-07
Chromosome	Homo sapiens 10q	20	285	217	6904	1.45E-03
Chromosome	Homo sapiens 6q	16	285	157	6904	1.94E-03
Chromosome	Homo sapiens 10	21	285	274	6904	8.84E-03
KEGG pathway	Purine metabolism	9	50	59	893	1.18E-02
KEGG pathway	Pyrimidine metabolism	7	50	39	893	1.63E-02
KEGG pathway	Nucleotide metabolism	10	50	78	893	2.12E-02
Chromosome	Homo sapiens 4	18	285	260	6904	3.90E-02
Chromosome	Homo sapiens 6	24	285	385	6904	4.47E-02

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Hyperdiploid >50 vs. the remaining B lineage ALLs

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System	Gene category	List hits	List total	Population hits	Population total	EASE score
Chromosome	Homo sapiens 16	27	270	285	6904	4.09E-05
Chromosome	Homo sapiens 16q	15	270	133	6904	6.32E-04
Chromosome	Homo sapiens 13	13	270	134	6904	5.85E-03
Chromosome	Homo sapiens 13q	13	270	134	6904	5.85E-03
Chromosome	Homo sapiens 2p	16	270	198	6904	1.02E-02
KEGG pathway	Signal transduction	9	36	91	893	1.98E-02
Chromosome	Homo sapiens 1	38	270	707	6904	3.71E-02

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*MLL* vs. the remaining B lineage ALLs

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System	Gene category	List hits	List total	Population hits	Population total	EASE score
KEGG pathway	Neurodegenerative DISORDERS	3	5	65	893	2.85E-02

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*MLL* vs. the remaining AMLs

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No enriched categories

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*MLL* vs. the remaining B lineage ALLs and AMLs

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No enriched categories

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