

Molecular similarity between myelodysplastic form of chronic myelomonocytic leukemia and refractory anemia with ring sideroblasts

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Online Supplementary Table S1. Clinical and hematological features of 53 CMML samples.

Number of patients	Sex/Age (years) at sampling	Diagnosis (WHO)	Antecedent of chemotherapy or radiotherapy	Organomegaly	Peripheral blood					Bone marrow		Treatment at sampling	
					WBC (G/L)	Hb (g/dL)	MCV (fL)	ANC (G/L)	Monocytes (G/L)	Platelets (G/L)	Blasts (%)		Monocytes (%)
MP-CMML													
HD-0178	M/42	CMML 1	no	no	17.3	15.2	nd	10.2	1.2	263	2	12	none
HD-0182	F/74	CMML 1	no	no	16	14.8	nd	nd	1.9	232	3	3	none
HD-0200	M/71	CMML 1	no	no	22	9.7	nd	nd	7	57	8	32	TA
HD-0201	M/86	CMML 1	nd	splenomegaly	116.8	8.1	92	63	40	41	7	nd	none
HD-0223	M/85	CMML 1	no	no	27.9	10	99	14.7	4.9	73	2	18	none
HD-0228	M/70	CMML 1	no	splenomegaly hepatomegaly	32	13.2	nd	25	5	50	5	12	TA
HD-0229	M/87	CMML 2	yes	no	16	12.6	100	10.4	3.2	662	12	22	none
HD-0257	F/71	CMML 1	no	no	16.3	10	79	12.9	2	272	5	17	EPO
HD-0272	F/75	CMML 1	no	no	10	nd	nd	nd	3	nd	3	7	hydroxyurea
HD-0273	M/76	CMML 1	no	no	32.4	14	86	13.6	15	118	9	23	none
HD-0318	M/65	CMML 2	no	no	37	10.9	nd	23	5.7	208	15	12	none
HD-0318	M/69	CMML 1	yes	splenomegaly + hepatomegaly	30	12.3	97.4	23.4	1	174	3	6	none
HD-0320	F/74	CMML 2	no	no	43.5	10.2	105.2	14.8	14.5	188	15	15	none
HD-0321	M/55	CMML 2	no	no	55	9.8	106	27	14.8	239	15	35	none
HD-0322	F/61	CMML 1	no	no	38	13	nd	31.7	3.5	415	3	6	hydroxyurea
HD-0327	F/72	CMML 1	no	no	188	8	95	78	43	30	9	27	none
HD-0388	M/78	CMML 1	no	None	13.2	11.8	93	4.3	4.6	63	3	33	TA
HD-0387	F/70	CMML 2	yes	no	64	8.5	101	12	46	160	14	40	none
HD-0370	M/70	CMML 2	no	splenomegaly	25.4	10	91	15	2.5	128	18	10	TA
HD-0378	F/65	CMML 2	yes	no	18	9.6	98	9.2	2.9	660	11	14	transfusions
HD-0397	F/72	CMML 1	no	no	26.5	13	85	48.0	4.7	411	6	45	none
HD-0398	M/59	CMML 1	no	splenomegaly	36	9.8	102	20.5	3	299	6	20	hydroxyurea
HD-0388	M/74	CMML 1	no	splenomegaly, microadenomegaly	6	9.3	nd	nd	2	150	6	30	hydroxyurea + EPO
HD-0404	M/89	CMML 2	no	no	35	8.3	91.4	14.3	12	123	16	34	none
HD-0486	M/53	CMML 2	no	no	14.7	12	nd	80	6.3	4.4	12	22	none
HD-0427	F/86	CMML 1	no	splenomegaly	41.7	9.8	94	15	10	117	5	28	none
HD-0688	M/88	CMML 1	no	no	28.4	12.2	89	15	6.8	115	8	37	TA
HD-0671	F/71	CMML 2	no	no	35.9	8.6	87	12.7	4.7	420	15	30	none
HD-0707	M/85	CMML 1	no	no	11.8	12.5	88	7.0	2.25	208	4	28	hydroxyurea
HD-0716	M/69	CMML 1	no	no	15	13.5	92.2	7.85	1.4	357	7	6	none
HD-0728	M/83	CMML 1	no	no	17.9	12.2	74	7.9	2.87	112	5	12	TA
MD-CMML													
HD-0178	M/88	CMML 1	no	no	6.9	10.5	nd	2.9	1.5	136	7	22	none
HD-0197	M/59	CMML 1	no	hepatomegaly	11.4	14.0	nd	nd	2.6	39	6	23	none
HD-0206	M/73	CMML 2	no	no	8.8	8.9	89	7	1.2	380	18	13	none
HD-0230	M/86	CMML 1	no	no	10.4	14.1	85	5	1.78	43	8	20	none
HD-0242	F/82	CMML 1	no	no	6.9	11.4	101	2.4	1.9	80	5	10	none
HD-0264	F/83	CMML 2	no	no	5.1	7.4	nd	nd	1	145	13	15	none
HD-0271	F/82	CMML 1	no	no	5.0	9.0	100	5.5	1.35	136	6	18	none
HD-0280	M/79	CMML 1	no	no	7.1	16.2	95	3.3	1.3	245	7	18	none
HD-0328	M/73	CMML 1	no	no	7.4	13.0	nd	nd	4.5	107	4	20	none
HD-0330	M/76	CMML 1	no	hepatomegaly	5.1	16.4	88	1.7	1.79	159	7	15	none
HD-0355	M/65	CMML 1	yes	no	4.0	13.7	nd	2	1	91	7	12	none
HD-0372	M/60	CMML 1	no	no	12.0	12.0	94	7.7	1.1	414	4	10	none
HD-0380	M/82	CMML 1	no	splenomegaly polyadenomegaly	5.4	10.2	94	3	1.1	225	4	10	none
HD-0388	F/71	CMML 1	no	no	7.1	12.8	91	2.5	1.15	120	6	22	none
HD-0398	M/75	CMML 1	no	nd	10.3	11.3	93	6.6	2	89	4	11	none
HD-0638	F/68	CMML 1	no	no	5.1	11.1	93	1.6	1.38	166	8	18	none
HD-0680	M/80	CMML 1	no	microadenomegaly	6.1	12.3	nd	1.5	1.7	124	5	15	none
HD-0703	M/74	CMML 1	no	no	12.8	10.7	90.5	7.5	1.42	285	1	4	none
HD-0711	M/78	CMML 1	no	no	9.74	13.4	91.2	5.75	1.35	97.4	3	19	transfusions
HD-0712	M/41	CMML 1	no	no	5.8	16.1	95	6	1	399	3	6	none
HD-0743	M/68	CMML 1	no	no	2.8	12.5	nd	0.1	2	113	7	19	none
HD-0755	M/46	CMML 1	yes	no	5.8	11.7	nd	5	2.4	93	4	12	none

ANC: absolute neutrophil count
 MP-CMML : myeloproliferative form of chronic myelomonocytic leukemia defined by a leukocytosis superior to 13G/L
 MD-CMML : myelodysplastic form of chronic myelomonocytic leukemia defined by a leukocytosis inferior to 13G/L
 nd : no data
 TA : therapeutic abstention
 EPO: erythropoietin

Online Supplementary Table S2. Top genes upregulated in CD34⁺ cells from supervised analysis of CMML and MDS.

Affymetrix Annotation	Affymetrix Probe ID	DS	Status
TYMS_nbS:1_Thymidylate synthase	243016_at	2,43	UP in MP CMML
---_nbS:1_CDNA FLJ30581 fis, clone	238824_at	1,66	UP in MP CMML
FLJ20628_nbS:1_hypothetical protein	221229_s_at	1,64	UP in MP CMML
ZCCHC11_nbS:1_Zinc finger, CCHC domain	230713_at	1,55	UP in MP CMML
PMS2L2_nbS:1_postmeiotic sex chromatin protein	215412_x_at	1,55	UP in MP CMML
---_nbS:1_Full-length cDNA clone	235171_at	1,52	UP in MP CMML
HNRPA3_nbS:1_heterogeneous nuclear ribonucleoprotein A3	211929_at	1,50	UP in MP CMML
THOC1_nbS:1_THO complex 1 subunit	204064_at	1,50	UP in MP CMML
ZNF587_nbS:1_Zinc finger protein	221963_x_at	1,47	UP in MP CMML
ZXDC_nbS:1_ZXD family zinc finger	218639_s_at	1,45	UP in MP CMML
GAS6_nbS:1_Growth arrest-specific factor 6	238127_at	1,45	UP in MP CMML
PHC1_nbS:3_polyhomeotic-like protein 1	218338_at	1,45	UP in MP CMML
RBM25_nbS:1_RNA binding motif protein 25	212033_at	1,44	UP in MP CMML
OGT_nbS:1_O-linked N-acetylglucosaminyl transferase	209240_at	1,42	UP in MP CMML
ZNF587_nbS:1_Zinc finger protein	241912_at	1,40	UP in MP CMML
LONPL_nbS:1_Peroxisomal long-chain fatty acid CoA ligase	221833_at	1,39	UP in MP CMML
CTGLF1_nbS:1_centaurin, gamma	221850_x_at	1,39	UP in MP CMML
CCDC73_nbS:1_Coiled-coil domain containing 73	239848_at	1,39	UP in MP CMML
LOC285989_nbS:1_hypothetical protein	235231_at	1,38	UP in MP CMML
LOC150759_nbS:1_hypothetical protein	213703_at	1,37	UP in MP CMML
GMCL1_nbS:1_germ cell-less 1	218458_at	1,37	UP in MP CMML
KLHDC1_nbS:1_kelch domain containing 1	1552733_at	1,37	UP in MP CMML
CYLN2_nbS:1_cytoplasmic link protein 2	211031_s_at	1,35	UP in MP CMML
POMT1_nbS:1_protein-O-mannosyl transferase 1	218476_at	1,34	UP in MP CMML
NAG6_nbS:1_hypothetical protein	226972_s_at	1,34	UP in MP CMML
PNN_nbS:1_pinin, desmosome protein	212037_at	1,34	UP in MP CMML
C11orf54_nbS:1_Chromosome 11 open reading frame 54	238946_at	1,34	UP in MP CMML
TSC22D1_nbS:1_TSC22 domain containing 1	235315_at	1,34	UP in MP CMML
FAM30A_nbS:1_family with sequence similarity 30A member 1	220377_at	1,34	UP in MP CMML
MYEF2_nbS:1_myelin expression factor 2	232676_x_at	1,33	UP in MP CMML
DKFZP434A0131_nbS:2_DKFZ	223724_s_at	1,33	UP in MP CMML
ABI2_nbS:1_Abl interactor 2 cytosolic	225112_at	1,32	UP in MP CMML
BRF1_nbS:1_BRF1 homolog, essential for cell cycle	203754_s_at	1,31	UP in MP CMML
TOX_nbS:1_thymus high mobility group protein	204529_s_at	1,30	UP in MP CMML
RGS1_nbS:1_regulator of G-protein signaling 1	202988_s_at	1,30	UP in MP CMML
LOC23117_nbS:7_KIAA0220-like	211996_s_at	1,29	UP in MP CMML
---_nbS:1_MRNA (fetal brain cDNA)	239735_at	1,28	UP in MP CMML
CTGLF1_nbS:6_centaurin, gamma	221971_x_at	1,28	UP in MP CMML
IMPA1_nbS:1_inositol(myo)-1-phosphatase	203011_at	1,28	UP in MP CMML
RHOH_nbS:1_Ras homolog gene family member H	236293_at	1,27	UP in MP CMML
MEIS1_nbS:1_Meis1, myeloid leukemia inhibitory factor	242172_at	1,27	UP in MP CMML
CALN1_nbS:1_calneuron 1 chaperonin	223885_at	1,26	UP in MP CMML
STARD9_nbS:1_START domain containing 9	227108_at	1,26	UP in MP CMML
PMS2L3_nbS:1_postmeiotic sex chromatin protein	216525_x_at	1,26	UP in MP CMML
CROP_nbS:1_cisplatin resistance protein	203804_s_at	1,26	UP in MP CMML
C20orf59_nbS:1_chromosome 20 open reading frame 59	219559_at	1,26	UP in MP CMML
ABI2_nbS:1_abl interactor 2 cytosolic	209856_x_at	1,25	UP in MP CMML
38961_nbS:1_septin 6_chromosome 2	212415_at	1,25	UP in MP CMML
ZFP36L2_nbS:1_zinc finger protein	201367_s_at	1,25	UP in MP CMML
LOC399761_nbS:2_hypothetical protein	239151_at	1,24	UP in MP CMML
CDRT4_nbS:1_CMT1A duplicon	228482_at	1,24	UP in MP CMML
PMS2L3_nbS:1_postmeiotic sex chromatin protein	214473_x_at	1,24	UP in MP CMML
SMA4_nbS:9_SMA4_chromosome 5	215599_at	1,23	UP in MP CMML
---_nbS:1_CDNA clone IMAGE	227431_at	1,22	UP in MP CMML
FAM62B_nbS:1_Family with sequence similarity 62B member 1	235912_at	1,22	UP in MP CMML
SMARCE1_nbS:1_SWI/SNF related	229511_at	1,22	UP in MP CMML
ZCCHC11_nbS:1_zinc finger, CCHC domain	212704_at	1,22	UP in MP CMML
---_nbS:1_CDNA FLJ40566 fis, clone	241388_at	1,22	UP in MP CMML
CXorf50_nbS:2_chromosome X open reading frame 50	242292_at	1,22	UP in MP CMML
BMI1_nbS:1_B lymphoma Mo-19 cell	202265_at	1,22	UP in MP CMML
C6orf134_nbS:1_chromosome 6 open reading frame 134	228510_at	1,22	UP in MP CMML
KIF13A_nbS:1_kinesin family member 13A	223520_s_at	-1,24	DOWN in MP CMML
PDLIM5_nbS:1_PDZ and LIM domain	216804_s_at	-1,24	DOWN in MP CMML
RAD23A_nbS:1_RAD23 homolog	201039_s_at	-1,24	DOWN in MP CMML
RHAG_nbS:1_Rh-associated GTPase	206145_at	-1,25	DOWN in MP CMML
CXorf33_nbS:1_chromosome X open reading frame 33	222269_at	-1,25	DOWN in MP CMML
OAT_nbS:1_ornithine aminotransferase	201599_at	-1,25	DOWN in MP CMML
OSBP2_nbS:1_oxysterol binding protein 2	223432_at	-1,25	DOWN in MP CMML
---_nbS:1_Transcribed locus	238431_at	-1,26	DOWN in MP CMML

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RHD_nbS:1_Rh blood group, D	210430_x_at	-1,27	DOWN in MP CMML
HBB_nbS:1_hemoglobin, beta	211696_x_at	-1,27	DOWN in MP CMML
TXNDC4_nbS:1_thioredoxin dc	208959_s_at	-1,31	DOWN in MP CMML
RHCE_nbS:2_Rh blood group,	215819_s_at	-1,33	DOWN in MP CMML
HBA1_nbS:2_hemoglobin, alph	204018_x_at	-1,33	DOWN in MP CMML
SEC14L4_nbS:1_SEC14-like 4	239492_at	-1,34	DOWN in MP CMML
HBB_nbS:1_hemoglobin, beta	209116_x_at	-1,34	DOWN in MP CMML
MARCKS_nbS:1_myristoylated	201669_s_at	-1,35	DOWN in MP CMML
HBA1_nbS:2_hemoglobin, alph	211699_x_at	-1,37	DOWN in MP CMML
RAP1GAP_nbS:1_RAP1 GTPa	203911_at	-1,37	DOWN in MP CMML
LAMP2_nbS:1_lysosomal-asso	203041_s_at	-1,37	DOWN in MP CMML
SLC6A8_nbS:1_solute carrier f	210854_x_at	-1,37	DOWN in MP CMML
FNDC3B_nbS:1_fibronectin typ	222692_s_at	-1,37	DOWN in MP CMML
HBB_nbS:1_hemoglobin, beta	217232_x_at	-1,38	DOWN in MP CMML
RHCE_nbS:1_Rh blood group,	216317_x_at	-1,39	DOWN in MP CMML
ANK1_nbS:1_ankyrin 1, erythr	207087_x_at	-1,40	DOWN in MP CMML
SPTA1_nbS:1_spectrin, alpha,	206937_at	-1,41	DOWN in MP CMML
ALAS2_nbS:1_aminolevulinate	211560_s_at	-1,43	DOWN in MP CMML
LYZ_nbS:1_lysozyme (renal an	1555745_a_at	-1,43	DOWN in MP CMML
DMWD_nbS:1_dystrophia myof	1554429_a_at	-1,44	DOWN in MP CMML
PRSS21_nbS:1_protease, serin	220051_at	-1,50	DOWN in MP CMML
HBA1_nbS:2_hemoglobin, alph	217414_x_at	-1,53	DOWN in MP CMML
SLC6A8_nbS:4_solute carrier f	215812_s_at	-1,53	DOWN in MP CMML
EDEM3_nbS:2_ER degradati	220342_x_at	-1,55	DOWN in MP CMML
LOC653778_nbS:1_similar to s	226179_at	-1,59	DOWN in MP CMML
MCEMP1_nbS:1_mast cell-exp	235568_at	-1,60	DOWN in MP CMML
ERAF_nbS:1_erythroid associa	219672_at	-1,61	DOWN in MP CMML
FECH_nbS:1_ferrochelatase (p	203116_s_at	-1,64	DOWN in MP CMML
SPTB_nbS:1_spectrin, beta, er	208416_s_at	-1,69	DOWN in MP CMML
HBD_nbS:1_hemoglobin, delta,	206834_at	-1,73	DOWN in MP CMML
HBA2_nbS:1_hemoglobin, alph	214414_x_at	-1,73	DOWN in MP CMML
KIAA1727_nbS:1_KIAA1727 pr	226599_at	-1,76	DOWN in MP CMML
FLJ41603_nbS:1_FLJ41603 pr	227717_at	-1,76	DOWN in MP CMML
FBXO9_nbS:1_F-box protein 9,	210638_s_at	-1,76	DOWN in MP CMML
ALDH3B1_nbS:1_aldehyde def	205640_at	-1,77	DOWN in MP CMML
HMBS_nbS:1_hydroxymethylbi	203040_s_at	-1,82	DOWN in MP CMML
HBA1_nbS:2_hemoglobin, alph	209458_x_at	-1,84	DOWN in MP CMML
HBA1_nbS:1_hemoglobin, alph	211745_x_at	-1,87	DOWN in MP CMML
DDEF1_nbS:1_development ar	224796_at	-1,93	DOWN in MP CMML
EPB42_nbS:1_erythrocyte men	210746_s_at	-1,95	DOWN in MP CMML
DSC2_nbS:1_desmocollin 2, ct	204750_s_at	-1,96	DOWN in MP CMML
SLC6A8_nbS:1_solute carrier f	202219_at	-1,98	DOWN in MP CMML
TRIM10_nbS:1_tripartite motif-	221627_at	-2,03	DOWN in MP CMML
GYPB_nbS:1_glycophorin A (M	211821_x_at	-2,13	DOWN in MP CMML
HBM_nbS:1_hemoglobin, mu_c	240336_at	-2,14	DOWN in MP CMML
GYPB_nbS:1_glycophorin B (M	214407_x_at	-2,16	DOWN in MP CMML
GYPB_nbS:1_glycophorin B (M	211820_x_at	-2,33	DOWN in MP CMML
GYPB_nbS:1_glycophorin A (M	205837_s_at	-2,39	DOWN in MP CMML
SLC4A1_nbS:1_Solute carrier f	205592_at	-2,55	DOWN in MP CMML
GYPB_nbS:1_glycophorin A (M	205838_at	-2,87	DOWN in MP CMML
GYPB_nbS:1_glycophorin B (M	207459_x_at	-2,93	DOWN in MP CMML
FBXO9_nbS:1_F-box protein 9,	1566509_s_at	-3,28	DOWN in MP CMML
GYPB_nbS:2_glycophorin B (M	216833_x_at	-3,64	DOWN in MP CMML

Online Supplementary Table S3. Genes differentially expressed between MD-CMMLs and MP-CMMLs.

MD/MP CMML GES		
Genes upregulated in MD-CMML		
Affymetrix identity	Common name	Map
216833_x_at	GYPB	chr4q28-q31
1566509_s_at	FBXO9	chr6p12.3-p11.2
205838_at	GYPB	chr4q28.2-q31.1
205592_at	SLC4A1	chr17q21-q22
240336_at	HBM	chr16p13.3
221627_at	TRIM10	chr6p21.3
202219_at	SLC6A8	chrXq28
204750_s_at	DSC2	chr18q12.1
210746_s_at	EPB42	chr15q15-q21
224796_at	DDEF1	chr8q24.1-q24.2
209458_x_at	HBA1	chr16p13.3
203040_s_at	HMBS	chr11q23.3
205640_at	ALDH3B1	chr11q13
214414_x_at	HBA2	chr16p13.3
206834_at	HBD	chr11p15.5
208416_s_at	SPTB	chr14q23-q24.2
203116_s_at	FECH	chr18q21.3
219672_at	ERAF	chr16p11.2
235568_at	MCEMP1	chr19p13.2
226179_at	LOC653778	chr8p21.2

MDS GES		
Genes upregulated in RARS		
Affymetrix identity	Common name	Map
229151_at	SLC14A1	18q11-q12
220751_s_at	C5orf4	5q31-q32
240336_at	HBM	6p13.3
211820_x_at	GYPB	4q28.2-q31.1
207459_x_at	GYPB	4q28-q31
211207_s_at	ACSL6	5q31
221627_at	TRIM10	6p21.3
215449_at	BZRPL1	6p21.1
205012_s_at	HAGH	16p13.3
219630_at	PDZK1P1	1p33
223670_s_at	HEMGN	9q22.33
4q31.3	KIAA1727	4q31.3
229740_at	LOC643008	17q25.1
218644_at	PLEK2	14q23.3
223094_s_at	ANKH	5p15.1
205592_at	SLC4A1	17q21-q22
239205_s_at	CR1	1q32
223669_at	HEMGN	9q22.33
226599_at	KIAA1727	4q31.3
229740_at	LOC643008	17q25.1

OVERLAP CMML GES/MDS GES		
Genes upregulated in MD-CMML and RARS		
Affymetrix identity	Common name	Map
240336_at	HBM	16p13.3
205838_at	GYPB	4q28.2-q31.1
207459_x_at	GYPB	4q28-q31
221627_at	TRIM10	6p21.3
226599_at	KIAA1727	4q31.3
205592_at	SLC4A1	7q21-q22
227717_at	FLJ41603	5q33.1
211560_s_at	ALAS2	Xp11.21
208416_s_at	SPTB	14q23-q24.2
215819_s_at	RHCE	1p36.11
210430_x_at	RHD	1p36.11
202219_at	SLC6A8	Xq28
210746_s_at	EPB42	15q15-q21
223432_at	OSBP2	22q12.2
239492_at	SEC14L4	22q12.2
206145_at	RHAG	6p21.1-p11
219672_at	ERAF	16p11.2
203116_s_at	FECH	8q21.3
204018_x_at	HBA1	16p13.3
206937_at	SPTA1	1q21
206834_at	HBD	11p15.5
203040_s_at	HMBS	11q23.3
207087_x_at	ANK1	8p11.1
214414_x_at	HBA2	16p13.3
230713_at	ZCCHC11	1p32.3

OVERLAP CMML GES/MDS GES/ MDS-ext GES		
Genes upregulated in MD-CMML , RARS and RARS-ext		
Affymetrix identity	Common name	Map
211560_s_at	ALAS2	chrXp11.21
210746_s_at	EPB42	chr15q15-q21
219672_at	ERAF	chr16p11.2
203116_s_at	FECH	chr18q21.3
227717_at	FLJ41603	chr5q33.1
205838_at	GYPB	chr4q28.2-q31.1
204018_x_at	HBA1	chr16p13.3
214414_x_at	HBA2	chr16p13.3
206834_at	HBD	chr11p15.5
240336_at	HBM	chr16p13.3
203040_s_at	HMBS	chr11q23.3
206145_at	RHAG	chr6p21.1-p11
215819_s_at	RHCE	chr1p36.11
210430_x_at	RHD	chr1p36.11
205592_at	SLC4A1	chr17q21-q22
202219_at	SLC6A8	chrXq28
208416_s_at	SPTB	chr14q23-q24.2

Online Supplementary Table S4. Genes differentially expressed between RARS and RAEB MDS samples.

Affymetrix Annotation	Affymetrix Probe ID	DS	Status	---_nbS:1_Clone DNA57836 GI	236981_at	1,20	UP in RARS Sample
SLC14A1_nbS:1_solute carrier	229151_at	1,85	UP in RARS Sample	EPB49_nbS:1_erythrocyte men	204505_s_at	1,19	UP in RARS Sample
C5orf4_nbS:1_chromosome 5 c	220751_s_at	1,75	UP in RARS Sample	FLJ37034_nbS:1_hypothetical	229622_at	1,19	UP in RARS Sample
C5orf4_nbS:1_chromosome 5 c	48031_r_at	1,73	UP in RARS Sample	GCLC_nbS:1_glutamate-cystei	202923_s_at	1,19	UP in RARS Sample
HBM_nbS:1_hemoglobin, mu_c	240336_at	1,65	UP in RARS Sample	KREMEN1_nbS:2_krangle conti	227250_at	1,18	UP in RARS Sample
GYPB_nbS:1_glycophorin A (M	211820_x_at	1,60	UP in RARS Sample	SLC25A37_nbS:1_solute carri	221920_s_at	1,18	UP in RARS Sample
GYPB_nbS:1_glycophorin B (M	207459_x_at	1,59	UP in RARS Sample	PCAF_nbS:1_p300/CBP-assoc	203845_at	1,18	UP in RARS Sample
ACSL6_nbS:1_acyl-CoA synth	211207_s_at	1,58	UP in RARS Sample	FLJ20097_nbS:1_hypothetical	207045_at	1,18	UP in RARS Sample
TRIM10_nbS:1_tripartite motif	221627_at	1,57	UP in RARS Sample	CCL18_nbS:1_chemokine (C-C	209924_at	1,18	UP in RARS Sample
BZRPL1_nbS:1_benzodiazapin	215449_at	1,56	UP in RARS Sample	C4A_nbS:2_complement comp	214428_x_at	1,18	UP in RARS Sample
HAGH_nbS:1_hydroxyacylglut	205012_s_at	1,51	UP in RARS Sample	UROD_nbS:1_uroporphyrinoge	208971_at	1,17	UP in RARS Sample
GYPB_nbS:1_glycophorin A (M	211821_x_at	1,51	UP in RARS Sample	NDUFV3_nbS:1_NADH dehydr	226616_s_at	1,17	UP in RARS Sample
PDZK1P1_nbS:1_PDZK1 inter	219630_at	1,51	UP in RARS Sample	GATA1_nbS:1_GATA binding pi	210446_at	1,17	UP in RARS Sample
HEMGN_nbS:1_hemogen chr5	223670_s_at	1,49	UP in RARS Sample	C6orf192_nbS:1_chromosome	226301_at	1,17	UP in RARS Sample
KIAA1727_nbS:1_KIAA1727 pr	226599_at	1,49	UP in RARS Sample	OSBP2_nbS:1_Oxysterol bindi	239872_at	1,17	UP in RARS Sample
LOC643008_nbS:1_PP12104_	229740_at	1,49	UP in RARS Sample	TMOD1_nbS:1_tropomodulin 1	203661_s_at	1,16	UP in RARS Sample
PLEK2_nbS:1_pleckstrin 2_chr	218644_at	1,48	UP in RARS Sample	CR1_nbS:1_complement com	217484_at	1,15	UP in RARS Sample
ANKH_nbS:1_ankylosis, progr	223094_s_at	1,47	UP in RARS Sample	TRAK2_nbS:1_trafficking prote	202125_s_at	1,15	UP in RARS Sample
SLC4A1_nbS:1_solute carrier 1	205592_at	1,46	UP in RARS Sample	AADACL1_nbS:1_arylacetamid	225847_at	1,15	UP in RARS Sample
CR1_nbS:4_complement comp	239205_s_at	1,46	UP in RARS Sample	CLCN3_nbS:1_Chloride chann	201734_at	1,15	UP in RARS Sample
HEMGN_nbS:1_hemogen chr5	223669_at	1,45	UP in RARS Sample	TSPAN5_nbS:1_tetraspanin 5_	209890_at	1,15	UP in RARS Sample
CR1L_nbS:1_complement com	239206_at	1,45	UP in RARS Sample	DPM2_nbS:1_dolichyl-phospha	209391_at	1,15	UP in RARS Sample
TRIM10_nbS:1_tripartite motif	210579_s_at	1,45	UP in RARS Sample	HBB_nbS:1_Hemoglobin, beta_	1562981_at	1,15	UP in RARS Sample
SNCA_nbS:1_synuclein, alpha	204466_s_at	1,45	UP in RARS Sample	APOC1_nbS:1_apolipoprotein I	204416_x_at	1,15	UP in RARS Sample
GDF15_nbS:1_growth different	221577_x_at	1,43	UP in RARS Sample	---_nbS:1_Transcribed locus --	228214_at	1,14	UP in RARS Sample
GYPB_nbS:1_Glycophorin A (M	231616_at	1,43	UP in RARS Sample	SEC14L4_nbS:1_SEC14-like 4	239492_at	1,14	UP in RARS Sample
FLJ41603_nbS:1_FLJ41603 pr	227717_at	1,42	UP in RARS Sample	---_nbS:1_Transcribed locus --	236081_at	1,14	UP in RARS Sample
TNS1_nbS:1_tensin 1_chr2q35	218864_at	1,41	UP in RARS Sample	TNS1_nbS:1_tensin 1_chr2q35	221748_s_at	1,14	UP in RARS Sample
KIAA1727_nbS:1_KIAA1727 pr	244333_at	1,40	UP in RARS Sample	ARHGEF12_nbS:1_Rho guanin	201333_s_at	1,14	UP in RARS Sample
---_nbS:1 ---_chr8:234449	231078_at	1,38	UP in RARS Sample	TGM2_nbS:1_transglutaminase	211003_x_at	1,14	UP in RARS Sample
GYPB_nbS:1_glycophorin A (M	205837_s_at	1,38	UP in RARS Sample	RHAG_nbS:1_Rh-associated g	206145_at	1,14	UP in RARS Sample
ALAS2_nbS:1_aminolevulinate	211560_s_at	1,38	UP in RARS Sample	FAS_nbS:1_Fas (TNF receptor	215719_x_at	1,13	UP in RARS Sample
---_nbS:1 ---_PID:21176	211781_x_at	1,34	UP in RARS Sample	ERAF_nbS:1_erythroid associa	219672_at	1,13	UP in RARS Sample
GYPB_nbS:1_glycophorin B (M	214407_x_at	1,34	UP in RARS Sample	RHAG_nbS:1_Rh-associated g	211254_x_at	1,13	UP in RARS Sample
RHD_nbS:1_Rh blood group, C	210586_x_at	1,34	UP in RARS Sample	MKRN1_nbS:1_makorin, ring fi	209845_at	1,13	UP in RARS Sample
TSPAN5_nbS:1_tetraspanin 5_	225388_at	1,34	UP in RARS Sample	DDX3X_nbS:1_DEAD (Asp-Glu	212514_x_at	1,13	UP in RARS Sample
DARC_nbS:1_Duffy blood grou	208335_s_at	1,34	UP in RARS Sample	C22orf25_nbS:1_Chromosome	235396_at	1,12	UP in RARS Sample
GYPB_nbS:1_glycophorin B (M	216833_x_at	1,34	UP in RARS Sample	KLF1_nbS:1_Kruppel-like facto	210504_at	1,12	UP in RARS Sample
SNCA_nbS:1_synuclein, alpha	204467_s_at	1,33	UP in RARS Sample	DKFZp762H185_nbS:1_hypoth	226657_at	1,12	UP in RARS Sample
SOX6_nbS:1_SRY (sex determ	224178_s_at	1,33	UP in RARS Sample	FECH_nbS:1_ferrochelatase (p	203116_s_at	1,11	UP in RARS Sample
SLC25A37_nbS:1_solute carri	222528_s_at	1,32	UP in RARS Sample	EPOR_nbS:1_erythropoietin re	209963_s_at	1,11	UP in RARS Sample
BLVRB_nbS:1_biliverdin reduct	202201_at	1,32	UP in RARS Sample	TAL1_nbS:1_T-cell acute lymph	216925_s_at	1,11	UP in RARS Sample
SLC2A1_nbS:1_solute carrier f	201250_s_at	1,32	UP in RARS Sample	NPL_nbS:1_N-acetylneuramin	221210_s_at	1,11	UP in RARS Sample
SELENBP1_nbS:1_selenium bi	214433_s_at	1,32	UP in RARS Sample	SLC25A37_nbS:1_solute carri	218978_s_at	1,11	UP in RARS Sample
SPTB_nbS:1_spectrin, beta, er	208416_s_at	1,32	UP in RARS Sample	SLC14A1_nbS:1_solute carrier	205856_at	1,11	UP in RARS Sample
RHCE_nbS:1_Rh blood group,	216317_x_at	1,32	UP in RARS Sample	C20orf108_nbS:1_chromosome	224690_at	1,11	UP in RARS Sample
EPB42_nbS:1_Erythrocyte mer	240274_at	1,31	UP in RARS Sample	ANK1_nbS:1_ankyrin 1, erythr	240363_at	1,11	UP in RARS Sample
RHD_nbS:1_Rh blood group, C	210430_x_at	1,31	UP in RARS Sample	RILP_nbS:1_Rab interacting ly	227366_at	1,10	UP in RARS Sample
GYPE_nbS:1_glycophorin E_ct	207854_at	1,31	UP in RARS Sample	TTC25_nbS:1_tetrapetide	223924_at	1,10	UP in RARS Sample
RHCE_nbS:2_Rh blood group,	215819_s_at	1,31	UP in RARS Sample	CLCN3_nbS:1_chloride channe	201735_s_at	1,10	UP in RARS Sample
GRHL1_nbS:1_grainyhead-like	222830_at	1,31	UP in RARS Sample	ALAD_nbS:1_aminolevulinate,	218489_s_at	1,09	UP in RARS Sample
SLC6A8_nbS:1_solute carrier f	210854_x_at	1,30	UP in RARS Sample	FLCN_nbS:1_folliculin_chr17p1	235250_at	1,09	UP in RARS Sample
AQP1_nbS:1_aquaporin 1 (Col	209047_at	1,30	UP in RARS Sample	KEL_nbS:1_Kell blood group, n	206077_at	1,09	UP in RARS Sample
GYPB_nbS:1_glycophorin A (M	205838_at	1,30	UP in RARS Sample	PCBD2_nbS:1_pterin-4 alpha-c	1554894_a_at	1,09	UP in RARS Sample
EPB42_nbS:1_erythrocyte men	210746_s_at	1,30	UP in RARS Sample	CCL18_nbS:1_chemokine (C-C	32128_at	1,09	UP in RARS Sample
SNCA_nbS:1_synuclein, alpha	211546_x_at	1,30	UP in RARS Sample	STOM_nbS:1_stomatin_chr9q3	201060_x_at	1,08	UP in RARS Sample
CLCN3_nbS:1_Chloride chann	240237_at	1,30	UP in RARS Sample	FAM46C_nbS:1_family with sec	226811_at	1,08	UP in RARS Sample
LOC253012_nbS:1_hypothetic	242601_at	1,30	UP in RARS Sample	LOC317671_nbS:1_LOC31767	236305_at	1,08	UP in RARS Sample
CTSB_nbS:1_cathepsin B_chrt	213275_x_at	1,29	UP in RARS Sample	HBA1_nbS:2_hemoglobin, alph	204018_x_at	1,08	UP in RARS Sample
APOC1_nbS:1_apolipoprotein I	213553_x_at	1,29	UP in RARS Sample	tcag7.981_nbS:1_juxtaposed w	225800_at	1,07	UP in RARS Sample
HBO1_nbS:1_hemoglobin, thet	220807_at	1,29	UP in RARS Sample	SPTA1_nbS:1_spectrin, alpha,	206937_at	1,07	UP in RARS Sample
TGM2_nbS:1_transglutaminase	211573_x_at	1,28	UP in RARS Sample	TRIM58_nbS:1_tripartite motif	215047_at	1,07	UP in RARS Sample
TMOD1_nbS:1_tropomodulin 1	203662_s_at	1,28	UP in RARS Sample	TNRC15_nbS:1_Trinucleotide r	1558305_at	1,07	UP in RARS Sample
C6orf85_nbS:1_chromosome 6	223194_s_at	1,27	UP in RARS Sample	SLC25A37_nbS:1_solute carri	222529_at	1,07	UP in RARS Sample
BPGM_nbS:1_2,3-bisphosphog	203502_at	1,27	UP in RARS Sample	TMCC2_nbS:1_transmembran	213096_at	1,07	UP in RARS Sample
TRIM10_nbS:1_Tripartite motif	237207_at	1,26	UP in RARS Sample	PCK2_nbS:1_phosphoenolpyru	202847_at	1,07	UP in RARS Sample
ABCB6_nbS:1_ATP-binding ca	203192_at	1,26	UP in RARS Sample	HBA1_nbS:2_hemoglobin, alph	209458_x_at	1,06	UP in RARS Sample
EPOR_nbS:1_erythropoietin re	209962_at	1,26	UP in RARS Sample	KLC3_nbS:1_kinesin light chair	239853_at	1,06	UP in RARS Sample
SLC6A8_nbS:1_solute carrier f	213843_x_at	1,26	UP in RARS Sample	FAS_nbS:1_Fas (TNF receptor	204780_s_at	1,06	UP in RARS Sample
BCL2L1_nbS:1_BCL2-like 1_ct	212312_at	1,25	UP in RARS Sample	SLC6A8_nbS:1_solute carrier f	202219_at	1,06	UP in RARS Sample
---_nbS:1_CDNA FLJ11723 fis	227498_at	1,25	UP in RARS Sample	BSG_nbS:1_basigin (Ok blood	208677_s_at	1,06	UP in RARS Sample
EPOR_nbS:1_erythropoietin re	215054_at	1,25	UP in RARS Sample	DCUN1D1_nbS:1_DCN1, defer	222678_s_at	1,06	UP in RARS Sample
MARCKS_nbS:1_membrane-as	213256_at	1,25	UP in RARS Sample	ANK1_nbS:1_Anykrin 1, erythr	1559172_at	1,06	UP in RARS Sample
YIPF6_nbS:1_Yip1 domain fam	212340_at	1,24	UP in RARS Sample	LOC317671_nbS:1_LOC31767	239142_at	1,06	UP in RARS Sample
C6orf85_nbS:1_Chromosome f	242055_at	1,24	UP in RARS Sample	ANKRD9_nbS:1_ankyrin repea	230972_at	1,05	UP in RARS Sample
ABCC13_nbS:1_ATP-binding c	233371_at	1,24	UP in RARS Sample	ABCC13_nbS:1_ATP-binding c	1552583_s_at	1,05	UP in RARS Sample
RIPB_nbS:1_RaP2 Interacting	206196_s_at	1,23	UP in RARS Sample	HBD_nbS:1_hemoglobin, delta	206834_at	1,05	UP in RARS Sample
CTTN_nbS:1_cortactin_chr11q	214073_at	1,23	UP in RARS Sample	WNK1_nbS:1_WNK lysine defi	211992_at	1,05	UP in RARS Sample
PDZK1P1_nbS:1_PDZK1 inter	1553589_a_at	1,23	UP in RARS Sample	FECH_nbS:1_ferrochelatase (p	203115_at	1,04	UP in RARS Sample
SNCA_nbS:1_synuclein, alpha	207827_x_at	1,23	UP in RARS Sample	RRM2_nbS:1_ribonucleotide re	209773_s_at	1,04	UP in RARS Sample
FRMD4A_nbS:1_FERM domain	225168_at	1,23	UP in RARS Sample	TRAK2_nbS:1_trafficking protei	202124_s_at	1,04	UP in RARS Sample
CPOX_nbS:1_coproporphyrino	204172_at	1,22	UP in RARS Sample	---_nbS:1_Transcribed locus --	239327_at	1,04	UP in RARS Sample
SLC2A1_nbS:1_solute carrier f	201249_at	1,22	UP in RARS Sample	PBK_nbS:1_PDZ binding kinas	219148_at	1,03	UP in RARS Sample
CGI-69_nbS:1_CGI-69 protein_	223649_s_at	1,22	UP in RARS Sample	CLCN3_nbS:1_chloride channe	201733_s_at	1,03	UP in RARS Sample
GYPB_nbS:1_glycophorin B (M	216398_at	1,22	UP in RARS Sample	TMEM56_nbS:1_Transmembra	237515_at	1,03	UP in RARS Sample
SLC25A37_nbS:1_solute carri	242335_at	1,21	UP in RARS Sample	HMBS_nbS:1_hydroxymethylbi	203040_s_at	1,03	UP in RARS Sample
PTTG1_nbS:1_pituitary tumor-t	203554_x_at	1,21	UP in RARS Sample	HBA1_nbS:2_hemoglobin, alph	211699_x_at	1,03	UP in RARS Sample
SLC4A1_nbS:1_solute carrier f	1552713_a_at	1,20	UP in RARS Sample	G0S2_nbS:1_G0/G1switch 2_c	213524_s_at	1,03	UP in RARS Sample
EPOR_nbS:1_erythropoietin re	37986_at	1,20	UP in RARS Sample	CTTN_nbS:1_Cortactin_chr11q	227473_at	1,03	UP in RARS Sample
SLC6A8_nbS:4_solute carrier f	215812_s_at	1,20	UP in RARS Sample	ANK1_nbS:1_ankyrin 1, erythr	208353_x_at	1,03	UP in RARS Sample
NDPFP2_nbS:1_Nedd4 family ir	224802_at	1,20	UP in RARS Sample	ENTPD5_nbS:1_Ectonucleosid	226594_at	1,03	UP in RARS Sample
OSBP2_nbS:1_oxysterol bindi	223432_at	1,20	UP in RARS Sample	LOC653778_nbS:1_similar to	226179_at	1,03	UP in RARS Sample
RELN_nbS:1_reelin_chr7q22_c	205923_at	1,20	UP in RARS Sample	CTSE_nbS:1_cathepsin E_chrt	205927_s_at	1,02	UP in RARS Sample
ABCG2_nbS:1_ATP-binding ca	209735_at	1,20	UP in RARS Sample	ALS2CR2_nbS:1_amyotrophic	223266_at	1,02	UP in RARS Sample
				SLC25A21_nbS:1_solute carri	220474_at	1,01	UP in RARS Sample
				RXRA_nbS:1_retinoid X recept	202426_s_at	1,01	UP in RARS Sample

continued in the next column

continued in the next page

SLC2A1_nbS:1_Solute carrier 1	235633_at	1,01	UP in RARS Sample	FAS_nbS:1_Fas (TNF receptor	216252_x_at	0,89	UP in RARS Sample
CLCN3_nbS:1_chloride channe	201732_s_at	1,01	UP in RARS Sample	ELL2_nbS:1_elongation factor,	214446_at	0,89	UP in RARS Sample
FLJ22374_nbS:1_hypothetical	235559_at	1,01	UP in RARS Sample	__nbS:1_MRNA; cDNA DKFZl	229498_at	0,89	UP in RARS Sample
LOC441461_nbS:1_hypothetic	1558688_at	1,01	UP in RARS Sample	EIF2C2_nbS:1_Eukaryotic tran	213310_at	0,89	UP in RARS Sample
CDC34_nbS:1_cell division cyc	212540_at	1,01	UP in RARS Sample	TNXB_nbS:1_tenascin XB_chrf	213451_x_at	0,89	UP in RARS Sample
ABCB10_nbS:1_ATP-binding c	223200_s_at	1,00	UP in RARS Sample	CR1_nbS:1_complement comp	244313_at	0,88	UP in RARS Sample
GPR177_nbS:1_G protein-cou	228949_at	1,00	UP in RARS Sample	ARHGGEF12_nbS:1_Rho guanir	201334_s_at	0,88	UP in RARS Sample
BIRC5_nbS:1_baculoviral IAP r	210334_x_at	1,00	UP in RARS Sample	FLJ10159_nbS:1_hypothetical	218974_at	0,88	UP in RARS Sample
CR1_nbS:1_complement comp	217552_x_at	1,00	UP in RARS Sample	SESN3_nbS:1_sestrin 3_chrf11	235684_s_at	0,88	UP in RARS Sample
RHAG_nbS:1_Rh-associated g	206146_s_at	1,00	UP in RARS Sample	RNF123_nbS:1_ring finger prot	221063_x_at	0,88	UP in RARS Sample
tcag7.981_nbS:1_juxtaposed w	225798_at	0,99	UP in RARS Sample	KIAA1718_nbS:1_KIAA1718 pr	225142_at	0,88	UP in RARS Sample
TSPAN5_nbS:1_tetraspanin 5	225387_at	0,99	UP in RARS Sample	C20orf108_nbS:1_chromosome	224693_at	0,88	UP in RARS Sample
LGALS3_nbS:2_lectin, galactos	208949_s_at	0,99	UP in RARS Sample	NPL_nbS:1_N-acetylneuramin	223405_at	0,88	UP in RARS Sample
PAQR9_nbS:1_progestin and a	1558322_a_at	0,99	UP in RARS Sample	MKI67_nbS:1_antigen identifi	212022_s_at	0,87	UP in RARS Sample
GMPT7_nbS:1_guanosine mon	204187_at	0,99	UP in RARS Sample	TNS1_nbS:1_tensin 1_chrf2q35	221246_x_at	0,87	UP in RARS Sample
TMEM56_nbS:1_Transmembra	234980_at	0,99	UP in RARS Sample	MST1_nbS:1_macrophage stirr	216320_x_at	0,87	UP in RARS Sample
CTSB_nbS:1_cathepsin B_chrf	213274_s_at	0,99	UP in RARS Sample	SARS_nbS:1_seryl-tRNA synth	200802_at	0,87	UP in RARS Sample
__nbS:1_CDNA FLJ11723 fis,	227497_at	0,99	UP in RARS Sample	CXCL12_nbS:1_chemokine (C-	203666_at	0,87	UP in RARS Sample
APOBEC2_nbS:1_apolipoprote	208360_at	0,99	UP in RARS Sample	HBA2_nbS:1_hemoglobin, alph	214414_x_at	0,87	UP in RARS Sample
__nbS:1_ __ chr8:2190245	240168_at	0,99	UP in RARS Sample	EIF2C1_nbS:1_Eukaryotic tran	228120_at	-0,89	DOWN in RARS Sample
WLN1_nbS:1_WNK lysine defi	1555068_at	0,99	UP in RARS Sample	RHOQ_nbS:1_ras homolog ger	1559582_at	-0,89	DOWN in RARS Sample
TNL2_nbS:1_talin 2_chrf15q15	212703_at	0,98	UP in RARS Sample	CCNI_nbS:1_Cyclin 1_chrf4q21	208655_at	-0,89	DOWN in RARS Sample
ANK1_nbS:1_ankyrin 1, erythr	208352_x_at	0,98	UP in RARS Sample	TGFBFR1_nbS:1_Transforming	236561_at	-0,89	DOWN in RARS Sample
C5orf4_nbS:1_chromosome 5 c	480301_at	0,98	UP in RARS Sample	CNCB_nbS:1_cyclin C_chrfq2	201955_at	-0,89	DOWN in RARS Sample
MARCKS_nbS:1_membrane-as	231933_at	0,98	UP in RARS Sample	IRAK1BP1_nbS:1_Interleukin-1	213074_at	-0,90	DOWN in RARS Sample
ERMAP_nbS:1_erythroblast m	219905_at	0,98	UP in RARS Sample	LATS2_nbS:1_LATS, large tum	227013_at	-0,90	DOWN in RARS Sample
LOC129607_nbS:1_hypothetic	226702_at	0,98	UP in RARS Sample	NFKB1_nbS:1_nuclear factor o	209239_at	-0,90	DOWN in RARS Sample
PPP3R1_nbS:1_protein phosph	204507_s_at	0,97	UP in RARS Sample	ZNF266_nbS:1_zinc finger prot	214686_at	-0,90	DOWN in RARS Sample
GOT1_nbS:1_glutamic-oxaloac	208813_at	0,97	UP in RARS Sample	ITGAV_nbS:1_Integrin, alpha V	236251_at	-0,90	DOWN in RARS Sample
YPEL4_nbS:1_yippee-like 4 (D	235916_at	0,97	UP in RARS Sample	ITPR1_nbS:1_inositol 1,4,5-trip	216944_s_at	-0,90	DOWN in RARS Sample
AK1_nbS:1_adenylate kinase 1	202587_s_at	0,97	UP in RARS Sample	ITD2_nbS:1_SET domain co	219482_at	-0,90	DOWN in RARS Sample
HBA1_nbS:1_hemoglobin, alph	211745_x_at	0,97	UP in RARS Sample	MSRB3_nbS:1_methionine sulf	225790_at	-0,90	DOWN in RARS Sample
CRIP1_nbS:1_postsynaptic prc	222702_x_at	0,96	UP in RARS Sample	SSFA2_nbS:1_sperm specific	202506_at	-0,90	DOWN in RARS Sample
SNX22_nbS:1_sorting nexin 22	230509_at	0,96	UP in RARS Sample	UBE2J1_nbS:1_ubiquitin-conju	217825_s_at	-0,90	DOWN in RARS Sample
SNX22_nbS:1_sorting nexin 22	1569481_s_at	0,96	UP in RARS Sample	ZNF302_nbS:1_zinc finger prot	228392_at	-0,90	DOWN in RARS Sample
FABP3_nbS:1_fatty acid bindin	214285_at	0,96	UP in RARS Sample	TRAF3IP2_nbS:1_TRAF3 inter	215411_s_at	-0,91	DOWN in RARS Sample
UROD_nbS:1_uroporphyrinoge	208970_s_at	0,96	UP in RARS Sample	LOC400721_nbS:1_Similar to i	236229_at	-0,91	DOWN in RARS Sample
CASC5_nbS:1_cancer suscept	1552682_a_at	0,96	UP in RARS Sample	__nbS:1_Transcribed locus_	238694_at	-0,91	DOWN in RARS Sample
TNS1_nbS:1_Tensin 1_chrf2q3	221747_at	0,96	UP in RARS Sample	ANKRD6_nbS:1_ankyrin repea	204671_s_at	-0,91	DOWN in RARS Sample
__nbS:1_ __ chr9:1305265	228773_at	0,95	UP in RARS Sample	HKR1_nbS:1_GLI-Kruppel fami	231836_at	-0,91	DOWN in RARS Sample
LOC388588_nbS:1_hypothetic	230840_at	0,95	UP in RARS Sample	__nbS:1_Transcribed locus_	239963_at	-0,91	DOWN in RARS Sample
CPBE4_nbS:1_cytoplasmic pol	224829_at	0,95	UP in RARS Sample	TRPS1_nbS:1_trichorhinophal	234351_x_at	-0,91	DOWN in RARS Sample
SESN3_nbS:1_sestrin 3_chrf11	235683_at	0,95	UP in RARS Sample	LOC645032_nbS:1_hypothetic	243957_at	-0,92	DOWN in RARS Sample
MOSPD1_nbS:1_motile sperm	1557455_s_at	0,95	UP in RARS Sample	HDGFRP3_nbS:1_hepatoma-d	216693_x_at	-0,92	DOWN in RARS Sample
UBE2H_nbS:1_ubiquitin-conju	221962_s_at	0,95	UP in RARS Sample	NKS1_nbS:1_NIMA (never in r	213116_at	-0,92	DOWN in RARS Sample
ABHD5_nbS:1_abhydrolase do	218739_at	0,95	UP in RARS Sample	VEP313C_nbS:1_Vacuolar prote	235023_at	-0,92	DOWN in RARS Sample
FEZ1_nbS:1_fasciculation and	203562_at	0,95	UP in RARS Sample	LOC58486_nbS:1_transposon-	218263_s_at	-0,92	DOWN in RARS Sample
NUDT4_nbS:2_nudix (nucleosi	206303_s_at	0,95	UP in RARS Sample	__nbS:1_ __ chr13:512254	243514_at	-0,92	DOWN in RARS Sample
LOC643837_nbS:1_hypothetic	1557055_s_at	0,95	UP in RARS Sample	HDGFRP3_nbS:1_hepatoma-d	209524_at	-0,93	DOWN in RARS Sample
APOBEC3A_nbS:1_apolipopro	210873_x_at	0,94	UP in RARS Sample	TRIP12_nbS:1_Thyroid hormo	244659_at	-0,93	DOWN in RARS Sample
MGC17403_nbS:1_hypothetica	1553815_a_at	0,94	UP in RARS Sample	IDUA_nbS:1_iduronidase, alph	205059_s_at	-0,93	DOWN in RARS Sample
FRMD4A_nbS:1_FERM domai	208476_s_at	0,94	UP in RARS Sample	SLC30A7_nbS:1_Solute carrier	243524_at	-0,93	DOWN in RARS Sample
CXCL12_nbS:1_chemokine (C-	209687_at	0,94	UP in RARS Sample	__nbS:1_Transcribed locus, st	238668_at	-0,94	DOWN in RARS Sample
TIMD4_nbS:1_T-cell immunogl	1552280_at	0,94	UP in RARS Sample	IRF2BP2_nbS:1_interferon reg	224570_s_at	-0,94	DOWN in RARS Sample
ITSN1_nbS:1_intersectin 1 (SH	35776_at	0,94	UP in RARS Sample	ALCAM_nbS:1_Activated leuko	240655_at	-0,94	DOWN in RARS Sample
ABTB1_nbS:1_ankyrin repeat	229164_s_at	0,94	UP in RARS Sample	SOX6_nbS:1_SRY (sex determ	235526_at	-0,94	DOWN in RARS Sample
RNF14_nbS:1_ring finger prote	201824_at	0,93	UP in RARS Sample	DNAH1_nbS:1_dynein, axonen	228111_s_at	-0,94	DOWN in RARS Sample
ANK1_nbS:1_ankyrin 1, erythr	205389_s_at	0,93	UP in RARS Sample	ZAK_nbS:1_sterile alpha motif	238613_at	-0,94	DOWN in RARS Sample
CA1_nbS:1_carbonic anhydras	205950_s_at	0,93	UP in RARS Sample	TPT1_nbS:1_tumor protein, tra	214327_x_at	-0,94	DOWN in RARS Sample
HBA1_nbS:2_hemoglobin, alph	217414_x_at	0,93	UP in RARS Sample	__nbS:1_CDNA FLJ12874 fis,	225553_at	-0,95	DOWN in RARS Sample
C17orf37_nbS:1_chromosome	224447_s_at	0,93	UP in RARS Sample	CD44_nbS:1_CD44 molecule (I	212063_at	-0,95	DOWN in RARS Sample
GLRX5_nbS:1_glutaredoxin 5 l	221932_s_at	0,93	UP in RARS Sample	CD44_nbS:1_CD44 molecule (I	204489_s_at	-0,95	DOWN in RARS Sample
AQP3_nbS:1_aquaporin 3 (Gill	39248_at	0,93	UP in RARS Sample	DUSP10_nbS:1_dual specificit	215501_s_at	-0,95	DOWN in RARS Sample
MOSPD1_nbS:1_motile sperm	218853_s_at	0,93	UP in RARS Sample	RGPD5_nbS:5_RANBP2-like a	212842_x_at	-0,95	DOWN in RARS Sample
FRMD4A_nbS:1_FERM domai	225163_at	0,92	UP in RARS Sample	LRRFIP1_nbS:1_leucine rich r	201861_s_at	-0,96	DOWN in RARS Sample
HBG1_nbS:2_hemoglobin, gam	204419_x_at	0,92	UP in RARS Sample	DERL1_nbS:1_Der1-like domai	218172_s_at	-0,96	DOWN in RARS Sample
PINK1_nbS:1_PTEN induced p	209018_s_at	0,92	UP in RARS Sample	EFHC1_nbS:1_EF-hand domai	219833_s_at	-0,96	DOWN in RARS Sample
GATA1_nbS:1_GATA binding pi	1555590_a_at	0,92	UP in RARS Sample	GLUD2_nbS:1_glutamate dehy	215794_x_at	-0,96	DOWN in RARS Sample
CRIP1_nbS:1_postsynaptic prc	227942_s_at	0,92	UP in RARS Sample	CHCHD7_nbS:1_coiled-coil-h	218642_x_at	-0,96	DOWN in RARS Sample
C4A_nbS:2_complement comp	208451_s_at	0,92	UP in RARS Sample	ARMCX4_nbS:1_Armadillo rep	227444_at	-0,96	DOWN in RARS Sample
C14orf103_nbS:1_chromosome	219164_s_at	0,91	UP in RARS Sample	CUGBP2_nbS:1_CUG triplet r	227178_at	-0,96	DOWN in RARS Sample
CD5L_nbS:1_CD5 molecule-lik	206680_at	0,91	UP in RARS Sample	LOC401577_nbS:1_Hypothetic	239247_at	-0,96	DOWN in RARS Sample
CTTN_nbS:1_cortactin_chrf11q	201059_at	0,91	UP in RARS Sample	UBE2E1_nbS:1_ubiquitin-conju	212519_at	-0,97	DOWN in RARS Sample
FGFR1OP2_nbS:1_FGFR1 ont	1556283_s_at	0,91	UP in RARS Sample	DERL1_nbS:1_Der1-like domai	222543_at	-0,97	DOWN in RARS Sample
TGM2_nbS:1_transglutaminase	201042_at	0,91	UP in RARS Sample	LOC94431_nbS:1_RNA polym	216908_x_at	-0,97	DOWN in RARS Sample
HBG1_nbS:2_hemoglobin, gam	213515_x_at	0,91	UP in RARS Sample	__nbS:1_Clone 24723 mRNA	212676_at	-0,97	DOWN in RARS Sample
TOMM40_nbS:1_Translocase c	212884_x_at	0,91	UP in RARS Sample	KIAA0251_nbS:1_KIAA0251 pr	1560013_at	-0,97	DOWN in RARS Sample
NCOA4_nbS:1_nuclear recept	210774_s_at	0,91	UP in RARS Sample	NKTR_nbS:1_natural killer-tum	202380_s_at	-0,97	DOWN in RARS Sample
E2F2_nbS:1_E2F transcription	228361_at	0,91	UP in RARS Sample	JARID2_nbS:1_Jumonji, AT ricl	203297_s_at	-0,98	DOWN in RARS Sample
SLC25A37_nbS:1_solute carri	218136_s_at	0,91	UP in RARS Sample	__nbS:1_Transcribed locus_	239005_at	-0,98	DOWN in RARS Sample
CDK5RAP2_nbS:1_CDK5 regu	233540_s_at	0,91	UP in RARS Sample	MTMR2_nbS:1_Myotubularin r	231057_at	-0,98	DOWN in RARS Sample
HBG1_nbS:2_hemoglobin, gam	204848_x_at	0,91	UP in RARS Sample	RRN3_nbS:1_RRN3 RNA poly	216902_s_at	-0,98	DOWN in RARS Sample
MGC13057_nbS:1_hypothetica	223754_at	0,90	UP in RARS Sample	C3orf64_nbS:1_chromosome 3	221935_s_at	-0,98	DOWN in RARS Sample
ANK1_nbS:1_ankyrin 1, erythr	207087_x_at	0,90	UP in RARS Sample	PTEN_nbS:1_Phosphatase anc	240964_at	-0,98	DOWN in RARS Sample
H3S3T2_nbS:1_heparan sulfat	219697_at	0,90	UP in RARS Sample	LOC402617_nbS:1_hypothetic	241353_at	-0,98	DOWN in RARS Sample
EPOR_nbS:1_erythropoietin r	396_f_at	0,90	UP in RARS Sample	ABCA5_nbS:1_ATP-binding c	213353_at	-0,98	DOWN in RARS Sample
CENPA_nbS:1_centromere pro	210821_x_at	0,90	UP in RARS Sample	NPHP3_nbS:1_nephronophthi	235432_at	-0,98	DOWN in RARS Sample
PPOX_nbS:1_protoporphyrino	238117_at	0,90	UP in RARS Sample	LASS6_nbS:1_LAG1 longevity	235463_s_at	-0,98	DOWN in RARS Sample
PIPSK2A_nbS:1_phosphatidylr	205570_at	0,90	UP in RARS Sample	LAPTMA4_nbS:1_lyosomal-as	200673_at	-0,98	DOWN in RARS Sample
RAB10_nbS:1_RAB10, membe	222981_s_at	0,90	UP in RARS Sample	ZNF700_nbS:1_zinc finger prot	223590_at	-0,99	DOWN in RARS Sample
NUDT4_nbS:1_nudix (nucleosi	212181_s_at	0,89	UP in RARS Sample	PARP6_nbS:1_Poly (ADP-ribos	241867_at	-0,99	DOWN in RARS Sample
DNAJB2_nbS:1_DnaJ (Hsp40)	202500_at	0,89	UP in RARS Sample	ACAD11_nbS:1_acyl-Coenzym	225573_at	-0,99	DOWN in RARS Sample
TSTA3_nbS:1_tissue specific tr	201644_at	0,89	UP in RARS Sample	ZF548_nbS:1_zinc finger prot	1553719_s_at	-0,99	DOWN in RARS Sample
PPOX_nbS:1_protoporphyrino	204788_s_at	0,89	UP in RARS Sample	TM4SF1_nbS:1_transmembran	215034_s_at	-1,00	DOWN in RARS Sample
WDR40A_nbS:1_WD repeat c	224789_at	0,89	UP in RARS Sample	__nbS:1_Full length insert cD	226282_at	-1,00	DOWN in RARS Sample
LOC144871_nbS:1_hypothetic	206302_s_at	0,89	UP in RARS Sample	LOC144871_nbS:1_hypothetic	225284_at	-1,00	DOWN in RARS Sample

continued from the previous page

AOF2_nbS:1_Amine oxidase (f	238652_at	-1,00	DOWN in RARS Sample
ZCCHC11_nbS:1_Zinc finger, C	230713_at	-1,00	DOWN in RARS Sample
ZNF395_nbS:1_Zinc finger prof	236474_at	-1,00	DOWN in RARS Sample
ANKRD28_nbS:1_ankyrin repe	226025_at	-1,00	DOWN in RARS Sample
TM4SF1_nbS:1_transmembran	209387_s_at	-1,01	DOWN in RARS Sample
---_nbS:1_CDNA FLJ12909 fis,	230650_at	-1,01	DOWN in RARS Sample
KIAA1632_nbS:1_KIAA1632_c	236108_at	-1,01	DOWN in RARS Sample
CERK_nbS:1_ceramide kinase	218421_at	-1,01	DOWN in RARS Sample
TM4SF1_nbS:1_transmembran	209386_at	-1,02	DOWN in RARS Sample
UBE2Q2_nbS:1_ubiquitin-conju	224747_at	-1,02	DOWN in RARS Sample
PDCD6_nbS:1_Programmed c	81811_at	-1,02	DOWN in RARS Sample
---_nbS:1_CDNA FLJ13598 fis,	227290_at	-1,02	DOWN in RARS Sample
CDV3_nbS:1_CDV3 homolog (212010_s_at	-1,02	DOWN in RARS Sample
BTBD15_nbS:1_BTBTB (POZ) do	1554470_s_at	-1,03	DOWN in RARS Sample
SYNCRIP_nbS:1_synaptotagm	217833_at	-1,03	DOWN in RARS Sample
ADAM28_nbS:1_ADAM metalc	205997_at	-1,03	DOWN in RARS Sample
ITGAV_nbS:1_integrin, alpha V	202351_at	-1,03	DOWN in RARS Sample
SEC31L2_nbS:1_SEC31-like 2	209889_at	-1,03	DOWN in RARS Sample
ZC3H11A_nbS:1_zinc finger Cf	205788_s_at	-1,04	DOWN in RARS Sample
ZNF91_nbS:1_zinc finger prote	206059_at	-1,04	DOWN in RARS Sample
FNBP4_nbS:1_formin binding f	212232_at	-1,04	DOWN in RARS Sample
PDE4D_nbS:1_Phosphodiester	236610_at	-1,05	DOWN in RARS Sample
PDE4D_nbS:1_Phosphodiester	204491_at	-1,05	DOWN in RARS Sample
MAP4K3_nbS:1_mitogen-activ	218311_at	-1,05	DOWN in RARS Sample
ZNF275_nbS:1_zinc finger prot	225383_at	-1,05	DOWN in RARS Sample
TMEM32_nbS:1_transmembrai	225125_at	-1,06	DOWN in RARS Sample
FLJ31306_nbS:1_hypothetical	225724_at	-1,06	DOWN in RARS Sample
ZMYM6_nbS:1_zinc finger, MY	227595_at	-1,06	DOWN in RARS Sample
---_nbS:1_Transcribed locus_--	239803_at	-1,06	DOWN in RARS Sample
OTUD3_nbS:1_OTU domain cc	213216_at	-1,07	DOWN in RARS Sample
ATP2C1_nbS:1_ATPase, Ca++	230387_at	-1,07	DOWN in RARS Sample
KIAA0251_nbS:1_KIAA0251 pr	1560014_s_at	-1,07	DOWN in RARS Sample
MSRB3_nbS:1_Methionine sulf	1566482_at	-1,08	DOWN in RARS Sample
PRKD3_nbS:1_protein kinase I	211084_x_at	-1,08	DOWN in RARS Sample
---_nbS:1_CDNA FLJ38039 fis,	228159_at	-1,08	DOWN in RARS Sample
TRAK1_nbS:1_trafficking protei	226013_at	-1,09	DOWN in RARS Sample
MAMDC2_nbS:1_MAM domain	228885_at	-1,10	DOWN in RARS Sample
---_nbS:1_---_chr1:1650868	239392_s_at	-1,10	DOWN in RARS Sample
CUGBP2_nbS:1_CUG triplet re	202157_s_at	-1,12	DOWN in RARS Sample
RNF168_nbS:1_Ring finger prc	226832_at	-1,13	DOWN in RARS Sample
---_nbS:1_---_chr14:578043	241774_at	-1,14	DOWN in RARS Sample
GARNL1_nbS:1_GTPase activ.	213049_at	-1,14	DOWN in RARS Sample
FLJ20054_nbS:1_hypothetical	219696_at	-1,19	DOWN in RARS Sample
TBRG1_nbS:1_transforming gr	226318_at	-1,19	DOWN in RARS Sample
AMY1A_nbS:9_amylase, alpha	208498_s_at	-1,23	DOWN in RARS Sample
DICER1_nbS:1_Dicer1, Dcr-1 f	216260_at	-1,24	DOWN in RARS Sample
NPHP3_nbS:1_nephronophthis	235410_at	-1,29	DOWN in RARS Sample

Online Supplementary Table S5. Gene mutations in our series of 53 CMML samples.

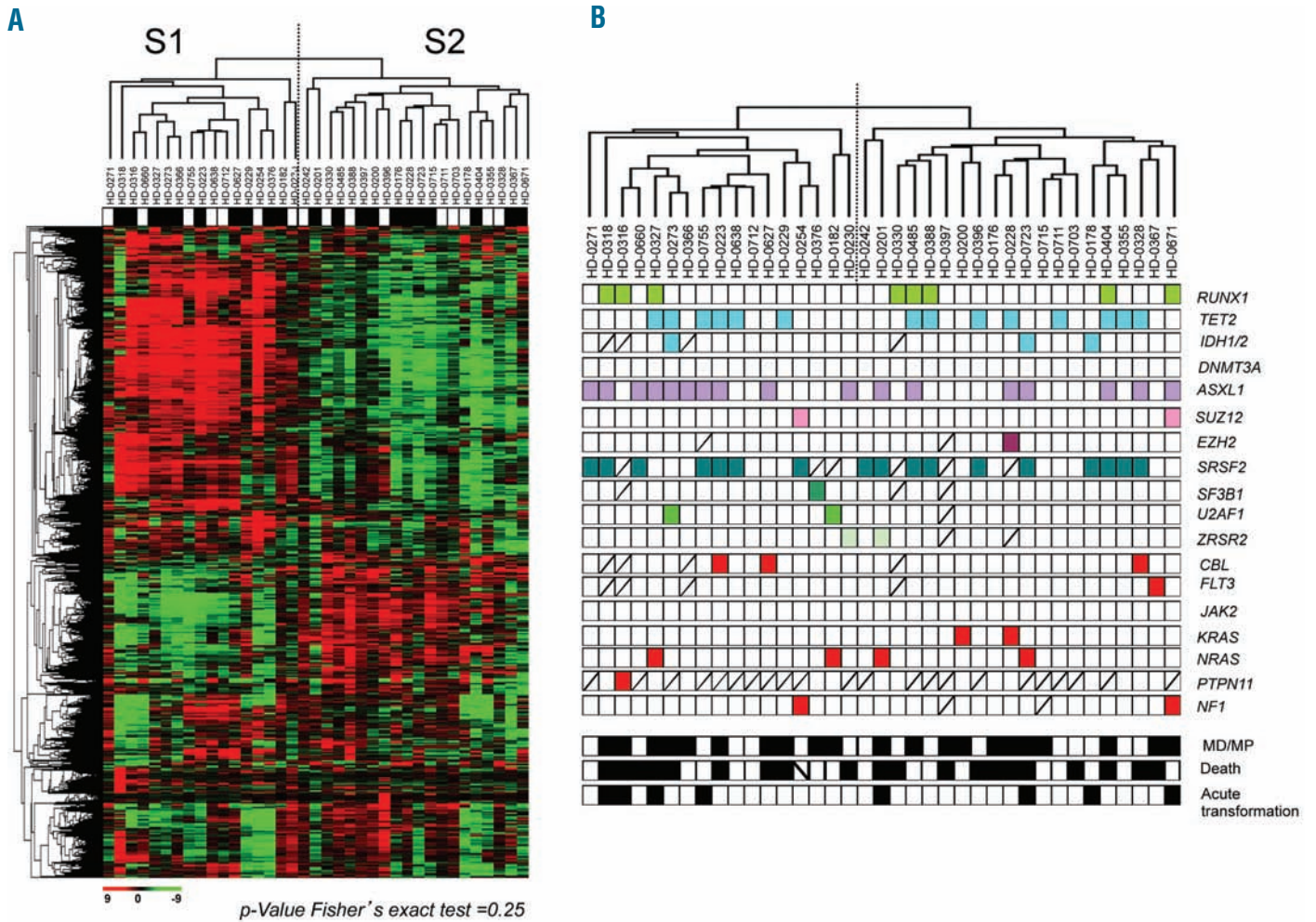
Case	Diagnosis	SWAGE (copy)	RANK1	TET2	Epigenetic modification			Splicing			Signaling			CD34-mRNA	Karyotype	ACGH			
				DNMT3A	AS1	5BZ2	5D3	BRF2	5381	5381	ZNF52	FLT3	JAK2	NRAS	PTPN11	NF1			
				DNMT3A	AS1	5BZ2	5D3	BRF2	5381	5381	ZNF52	FLT3	JAK2	NRAS	PTPN11	NF1			
HD-0176	M42	MF-CMML1																gain 7p21 (4RR), Xp22 (SH2BP1)	
HD-0182	F74	MF-CMML1																loss X	
HD-0200	M71	MF-CMML1																45,X,-X[20]	
HD-0201	M87	MF-CMML1																46,X,Y,t(10;11)(p12;p13)13q46 X[1]	
HD-0223	M85	MF-CMML1																46,X,Y[20]	
HD-0228	M70	MF-CMML1																46,X,Y[20]	
HD-0229	M87	MF-CMML2																46,X,Y[20]	
HD-0257	F71	MF-CMML1																46,X[20]	
HD-0272	F78	MF-CMML1																46,X[20]	
HD-0316	M76	MF-CMML1																46,X[20]	
HD-0318	M85	MF-CMML1																46,X[20]	
HD-0319	M89	MF-CMML1																46,X[20]	
HD-0320	F74	MF-CMML2																46,X[20]	
HD-0321	M55	MF-CMML2																46,X[20]	
HD-0322	F81	MF-CMML1																46,X[20]	
HD-0327	F72	MF-CMML1																46,X[20]	
HD-0366	M78	MF-CMML1																46,X[20]	
HD-0367	F70	MF-CMML2																46,X[20]	
HD-0370	M70	MF-CMML2																46,X[20]	
HD-0376	F65	MF-CMML2																46,X[20]	
HD-0397	F71	MF-CMML1																46,X[20]	
HD-0398	M82	MF-CMML1																46,X[20]	
HD-0399	M74	MF-CMML1																46,X[20]	
HD-0404	M88	MF-CMML2																46,X[20]	
HD-0465	M83	MF-CMML2																46,X[20]	
HD-0527	F87	MF-CMML1																46,X[20]	
HD-0569	M88	MF-CMML1																46,X[20]	
HD-0571	F71	MF-CMML1																46,X[20]	
HD-0707	M85	MF-CMML1																46,X[20]	
HD-0715	M89	MF-CMML1																46,X[20]	
HD-0723	M83	MF-CMML1																46,X[20]	
HD-0178	M88	MD-CMML1																46,X[20]	
HD-0187	M59	MD-CMML1																46,X[20]	
HD-0206	M73	MD-CMML2																46,X[20]	
HD-0230	M83	MD-CMML1																46,X[20]	
HD-0242	F82	MD-CMML1																46,X[20]	
HD-0254	F83	MD-CMML2																46,X[20]	
HD-0271	F82	MD-CMML1																46,X[20]	
HD-0280	M78	MD-CMML1																46,X[20]	
HD-0328	M73	MD-CMML1																46,X[20]	
HD-0330	M76	MD-CMML1																46,X[20]	
HD-0355	M65	MD-CMML1																46,X[20]	
HD-0372	M60	MD-CMML1																46,X[20]	
HD-0380	F82	MD-CMML1																46,X[20]	
HD-0396	F71	MD-CMML1																46,X[20]	
HD-0398	M70	MD-CMML1																46,X[20]	
HD-0638	F88	MD-CMML1																46,X[20]	
HD-0660	M80	MD-CMML1																46,X[20]	
HD-0703	M74	MD-CMML1																46,X[20]	
HD-0711	M79	MD-CMML1																46,X[20]	
HD-0712	M41	MD-CMML1																46,X[20]	
HD-0743	M68	MD-CMML1																46,X[20]	
HD-0755	M46	MD-CMML1																46,X[20]	

MF-CMML: myeloproliferative form of chronic myelomonocytic leukaemia defined by a haematologist superior to 150/L

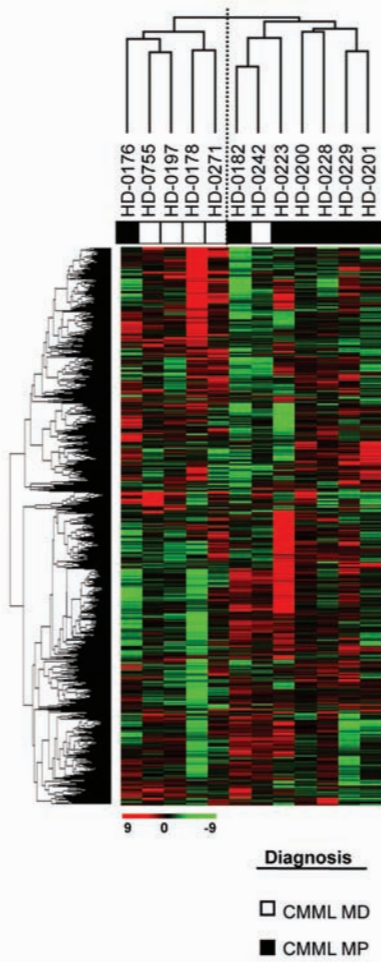
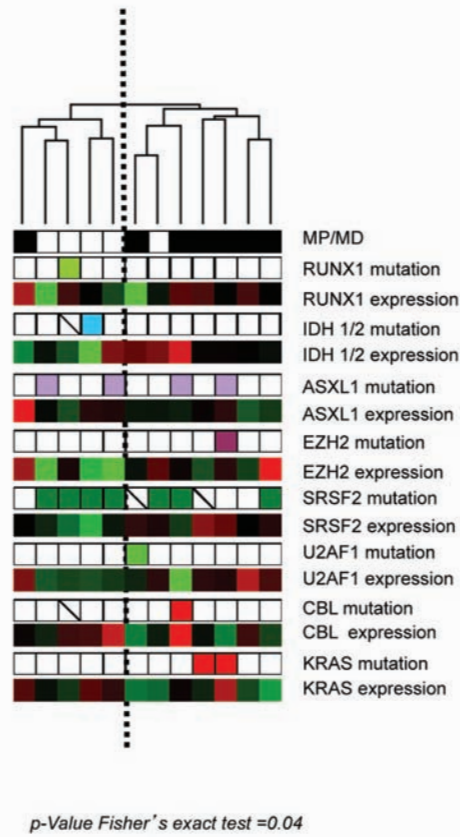
Online Supplementary Table S6. Gene mutations in our series of 32 MDS samples. Data are taken from refs. ^{8, 11}

Number	Sevage (time to sample)	WHO subtype	RUNX1	Epigenetic			Splicing			Signaling			Karyotype	aCGH
				TET2	IDH1/2	DNMT3A	ASXL1	EZH2	SRSF2	SF3B1	ZRSR2	U2AF35		
HD-0145	F68	RAERS	no	del	no	no	no	no	no	no	no	no	no	4q24 loss (CXXC4, TET2)
HD-0150	F83	RAERS	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0165	M60	RAERS	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0173	M71	RAERS	N146MfsX6	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0192	M82	RAERS	no	no	E661X	no	no	no	no	no	no	no	no	no CNA
HD-0246	M80	RAERS	no	no	no	no	no	no	no	no	no	no	no	Y loss
HD-0262	F73	RAERS	no	Q1524X	no	no	no	no	no	no	no	no	no	no CNA
HD-0265	F87	RAERS	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0129	M57	RAEB1	na	na	na	na	na	na	na	na	na	na	na	na
HD-0152	F75	RAEB1	no	V218WfsX32	no	no	no	no	na	na	na	na	na	no CNA
HD-0167	F77	RAEB1	no	no	no	no	no	no	na	na	na	na	na	loss: 5q14-q34, 6p22-p24, 1/p13 (DVL2); 6p26 cent (MAP3K4)
HD-0183	M70	RAEB1	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0190	M77	RAEB1	no	no	no	del	no	no	no	no	no	no	no	loss: 2p23, 2q24 (BAZ2B), 7p14, 7q21-qter, 12p11-p13, 12q12-q13, 13, 16p12, 16q, 18, 20q11, 20q11-qter, 21q21
HD-0196	M78	RAEB1	no	P1418R	no	G646WfsX12	no	no	no	no	no	no	no	na
HD-0205	M60	RAEB1	no	no	no	no	no	no	no	no	no	no	no	loss: 4q24-q31, 4q32, 4q34, 5q21-qter, 7p11-p14, 7q11-q21, 7q21-qter, 12p11-p13, 21q21, Xp11, in 6, 11q22-qter gain, 19q13-qter gain
HD-0233	M62	RAEB1	no	R1440TfsX38	no	no	no	no	no	no	no	no	no	no CNA
HD-0239	F59	RAEB1	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0269	M60	RAEB1	no	no	R132C	G646WfsX12	no	no	no	no	no	no	no	no CNA
HD-0270	M79	RAEB1	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0286	F73	RAEB1	no	P1575FfsX31	no	no	no	no	no	no	no	no	no	5q14-q34 loss
HD-0169	F62	RAEB2	no	no	no	no	no	no	no	no	no	no	no	7 loss
HD-0175	M71	RAEB2	no	no	R140Q	no	no	no	no	no	no	no	no	no CNA
HD-0180	M81	RAEB2	no	no	R140Q	G646WfsX12	C627Y	no	no	no	no	no	no	no CNA
HD-0193	F69	RAEB2	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0195	M72	RAEB2	no	no	no	no	no	no	no	no	no	no	no	5q21-34 loss, 7 loss, 21 gain
HD-0199	M72	RAEB2	na	no	no	no	no	no	no	no	no	no	no	trt 8, 22q11 loss
HD-0208	F50	RAEB2	no	no	no	G646WfsX12	no	no	no	no	no	no	no	na
HD-0210	M72	RAEB2	R201Q	no	no	G646WfsX12	no	no	no	no	no	no	no	no CNA
HD-0232	M63	RAEB2	no	no	no	no	no	no	no	no	no	no	no	no CNA
HD-0264	M68	RAEB2	no	L862SfsX6	no	G46WfsX12	no	no	no	no	no	no	no	no CNA
HD-0275	M83	RAEB2	no	no	no	G646WfsX12	no	no	no	no	no	no	no	trt 11
HD-0288	M62	RAEB2	no	no	no	no	no	no	no	no	no	no	no	na

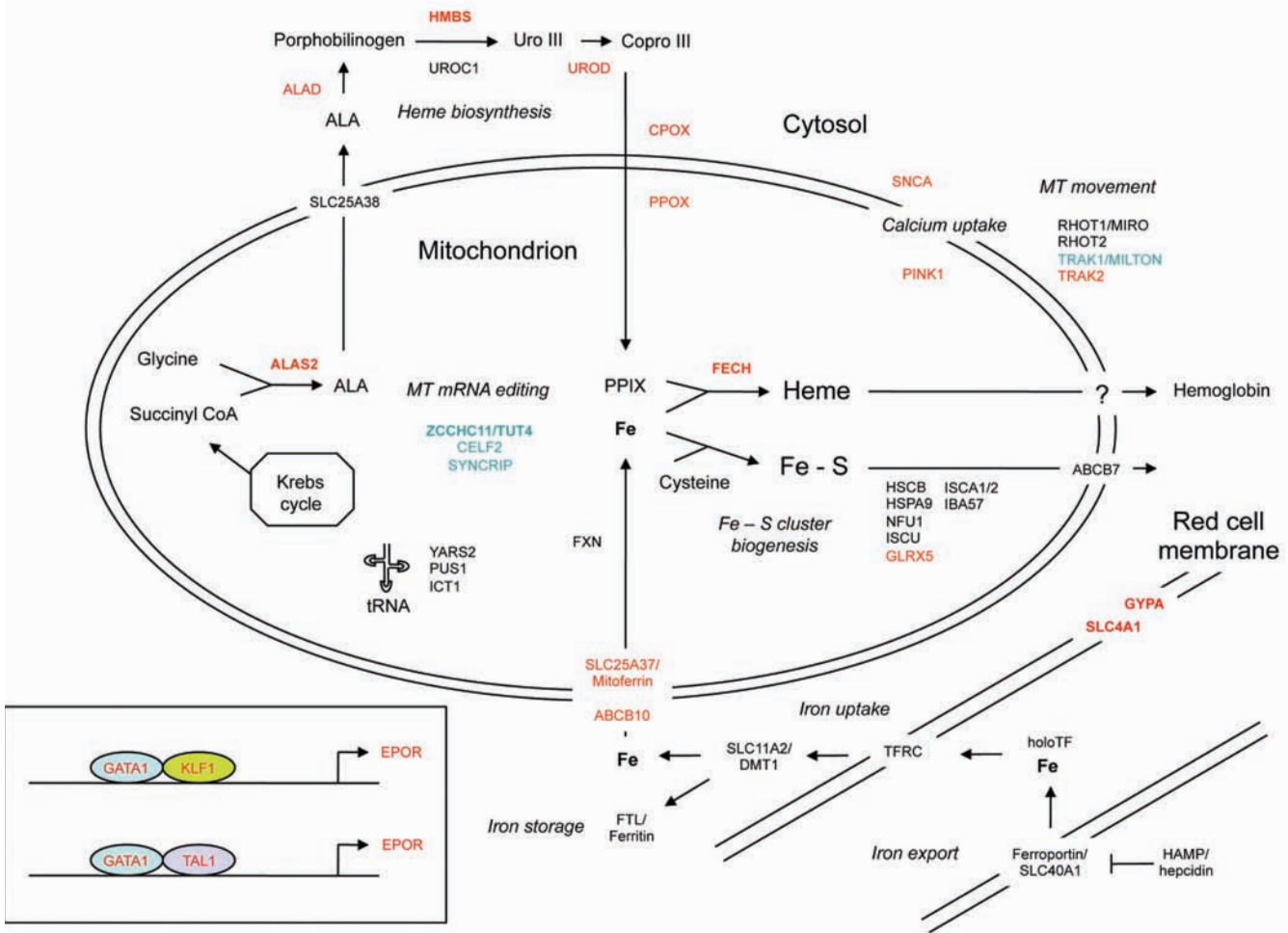
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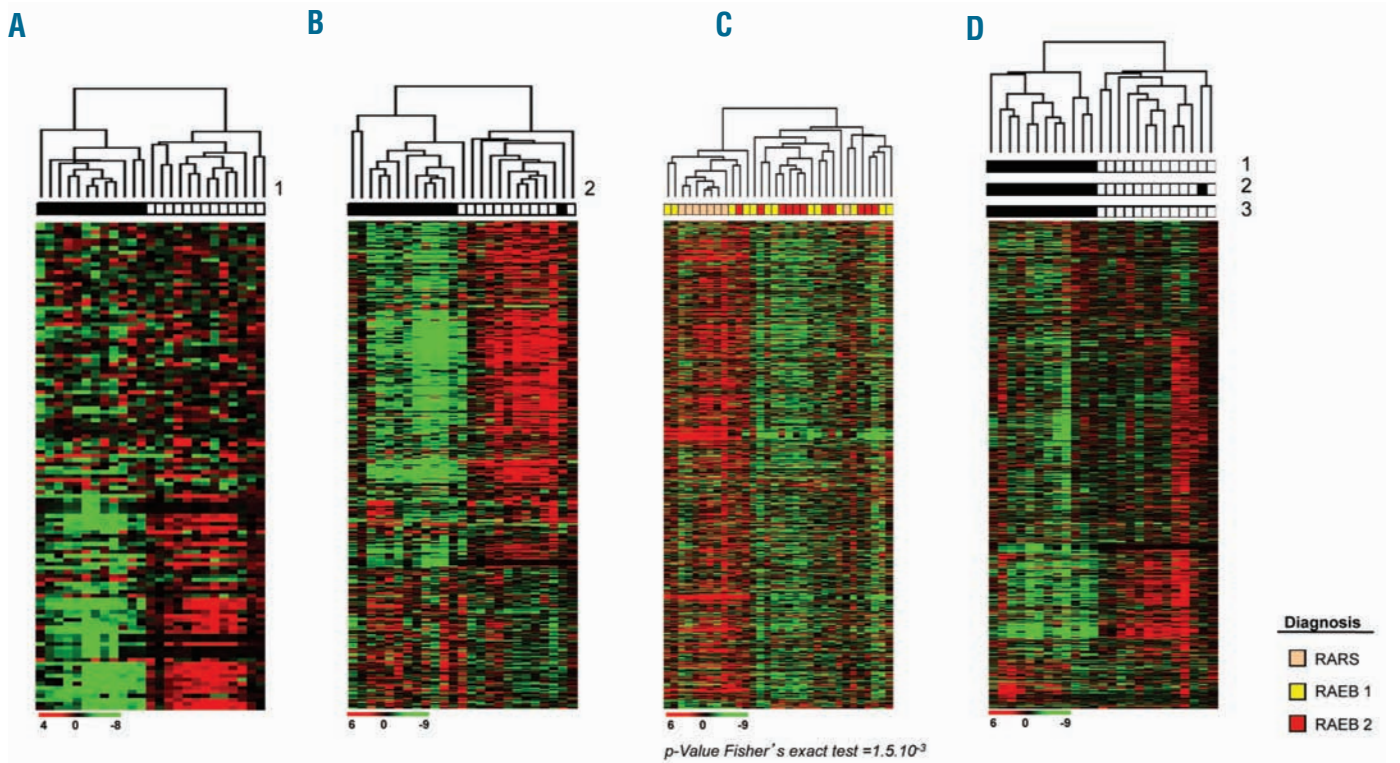
Online Supplementary Figure S1. Whole-genome expression profiling of CMML BM samples. **(A)** Hierarchical clustering of 37 CMML samples extracted from bone marrow and 9179 probe sets. Legend similar to Figure 1A. Two major sample clusters are evidenced, S1 and S2, including 17 and 20 cases, respectively. MD/MP forms are indicated by boxes in the stripe under the dendrogram: white for MP and black for MD. **(B)** Mutations in studied genes are indicated by colored filled boxes. Clinical and hematological data are indicated by black and white boxes.

A**B**

Online Supplementary Figure S2. Whole-genome expression profiling of CMML CD34-positive samples. (A) Hierarchical clustering of 12 CD34⁺ CMML samples and 12660 probe sets. Legend similar to Figure 1A. Two major sample clusters are evidenced including 5 and 7 cases, respectively. MD/MP forms are indicated by boxes in the stripe under the dendrogram: white for MP and black for MD. (B) Mutations in studied genes are indicated by colored filled boxes. The specific expression of each of the mutated genes in the 12 samples is shown below, as a median of probe set values (absence means the expression was eliminated by the filtering process).



Online Supplementary Figure S3. Schematic representation of a red blood cell mitochondrion showing various regulatory pathways potentially affected in MD-CMML and RARS. Proteins encoded by genes overexpressed in the MD/MP CMML or MDS gene expression signatures are shown in red (in bold if common to both GES). Proteins encoded by downregulated genes are shown in green. Details: RHOT and TRAK proteins belong to a motor/adaptor complex that links kinesins to the mitochondrial surface. PINK1 kinase phosphorylates RHOT1. PINK1 and α -synuclein regulate mitochondrial morphology and calcium uptake. Seven of the eight genes encoding enzymes of the heme synthesis pathway were overexpressed in the MDS GES. The SLC4A1 anion exchanger associates with glycoprotein A forming the Wright b blood group. At the bottom left, the rectangle shows red blood cell transcription factors and erythropoietin receptor gene overexpressed in the MDS GES.



Online Supplementary Figure S4. Independent validation of the gene expression signatures. (A) Hierarchical clustering of the 25 Mills' CMML mRNAs¹⁵ using our 122-gene MD/MP GES. Legend similar to Figure 1A. MD/MP forms are indicated by black and white boxes in stripe 1 under the dendrogram. (B) Similar to (A), but applied using our 428-gene MDS GES. (C) Hierarchical clustering of our 32 bone marrow MDS samples using the MDS-ext GES. MDS classes are indicated by colored boxes in the stripe under the dendrogram. (D) Similar to (C), but applied to the 25 Mills' CMML mRNAs using the MDS-ext GES. MD/MP forms are indicated by black and white boxes in stripe 3 under the dendrogram. Stripes 1 and 2 (from (A) and (B) respectively) are also shown for comparison.

