## Visualization of interesting genes

### Basic informations about dataset

### Expression

Variables	Samples	LumA	other	
20503	736	359	377	

### Methylation

Variables	Samples	LumA	other
24981	292	139	153

Chosen genes with small p-values for expression and methylation:

A2ML1

MSLN

ART3

SCRG1

FABP7

ROPN1

FANCA

RRM2

GAL

SLC7A5

POP1

CBX2

GABRP

RLBP1

MCM5

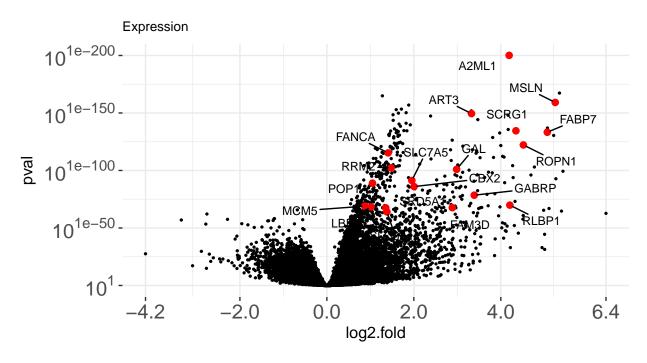
LBR

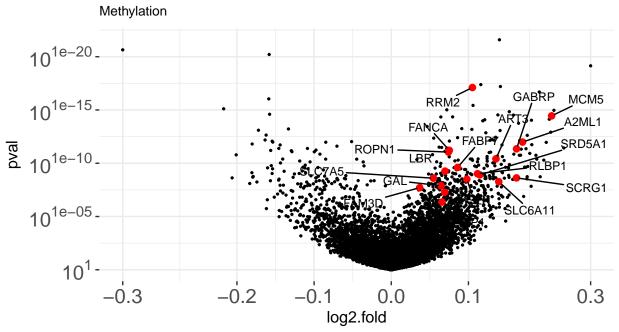
FAM3D

SRD5A1

SLC6A11

### Volcanoplots





### Methylation paths

### A2ML1

Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 19.3 74.5 95.8 142.9 136.5 3122.2 359

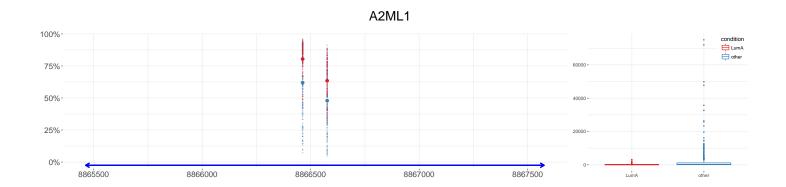
other 26.6 93.4 215 2516.4 1186.2 75020.3 377

 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.2
 0.7
 0.8
 0.7
 0.8
 0.9
 139

 other
 0.1
 0.4
 0.5
 0.5
 0.8
 0.9
 153



### ART3

Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 54.9 154.9 201.9 238.9 272.5 3089.2 359

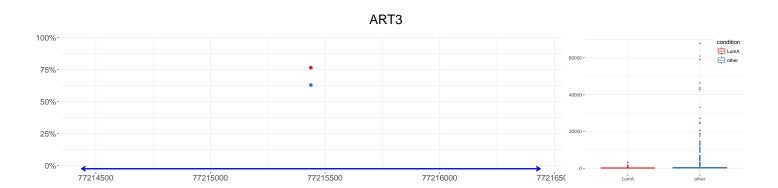
other 62.7 152.9 241.1 2425 597.8 67834.8 377

 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.3
 0.7
 0.8
 0.8
 0.9
 139

 other
 0.1
 0.5
 0.7
 0.6
 0.8
 0.9
 153



### CBX2

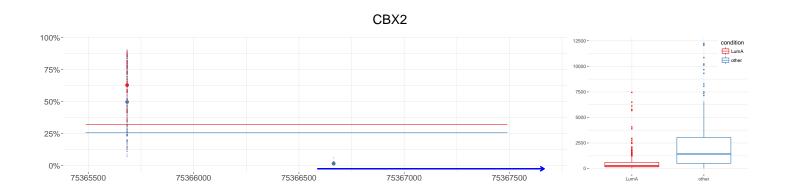
Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 38.2 162.1 269.4 557.1 594.5 7450.1 359

other 19.1 508.7 1423.8 2122.1 3035.4 12243.5 377

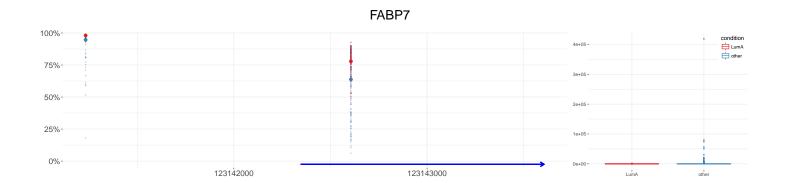
Methylation min 1st Q med mean 3rd Q max count **LumA** 0.1 0.2 0.3 0.3 0.4 0.5 139 0.3 0.5 153 other 0 0.1 0.3 0.4



### FABP7

Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	0	1.5	6.5	29.3	24.7	1370.6	359
other	0	1.2	10	2624.7	168.6	418524.5	377

Methylation								
min 1st Q med mean 3rd Q max co								
LumA	0.6	0.9	0.9	0.9	0.9	1	139	
other	0.1	0.7	8.0	8.0	0.9	1	153	



### FAM3D

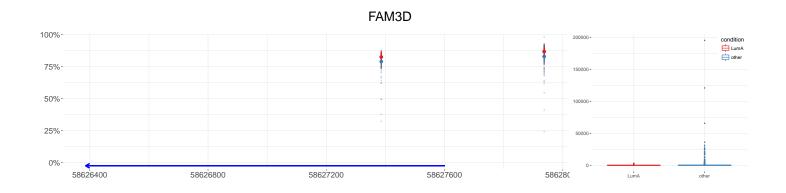
Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 0 38 76 198.1 201.3 3308.7 359

other 0 38 95 2463.9 452.1 195244.7 377

| Methylation | | min | 1st Q | med | mean | 3rd Q | max | count | | LumA | 0.7 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 153 | | 0ther | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 153 |



### **FANCA**

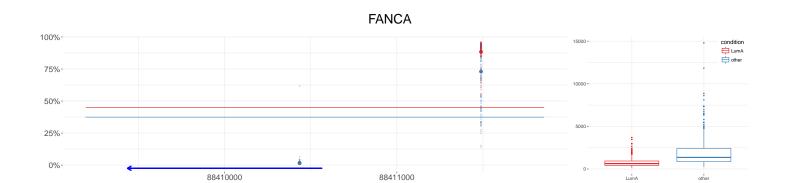
Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	138.9	426.3	633.2	758.8	939.9	3700.2	359
other	221.2	875.2	1363.8	1929.9	2415.8	14802.8	377

 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.2
 0.4
 0.5
 0.4
 0.5
 0.5
 139

 other
 0.1
 0.3
 0.4
 0.4
 0.5
 0.7
 153



### **GABRP**

Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 0.2 23.1 100.1 223.4 300.9 2270.7 359

other 0 12.3 74.1 2439.8 2222.2 36137.8 377

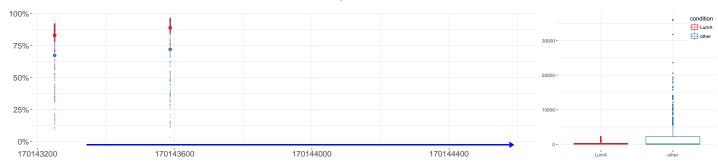
 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.1
 0.9
 0.9
 0.9
 0.9
 0.9
 139

 other
 0.1
 0.5
 0.8
 0.7
 0.9
 0.9
 153

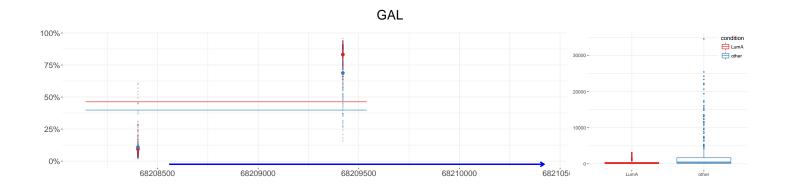
### GABRP



### GAL

Expression (cpm)								
	min 1st Q med mean 3rd Q max co							
LumA	0	69.3	181.2	321.9	405	3123.1	359	
other	0	149.2	442.4	2346	1684.1	34583.5	377	

# Methylation min 1st Q med mean 3rd Q max count LumA 0.2 0.4 0.5 0.5 0.5 0.7 139 other 0.1 0.3 0.4 0.4 0.5 0.7 153



LBR

Expression (cpm)

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 146.7
 599.6
 841.2
 934.2
 1192.4
 3571.2
 359

 other
 78.6
 886.8
 1395.2
 1762.9
 2307.3
 9816.6
 377

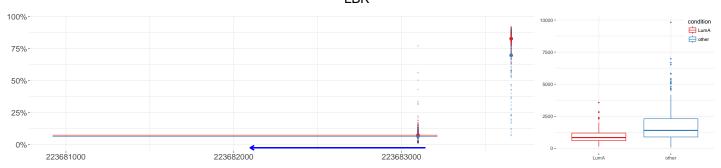
Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.3
 0.4
 0.4
 0.5
 0.5
 0.8
 139

 other
 0.1
 0.3
 0.4
 0.4
 0.4
 0.6
 153

LBR



### MCM5

Expression (cpm)

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 172.3
 601.2
 864.5
 993
 1206.5
 4467.4
 359

 other
 201.5
 866.8
 1334.5
 1706.9
 2071.7
 9743.3
 377

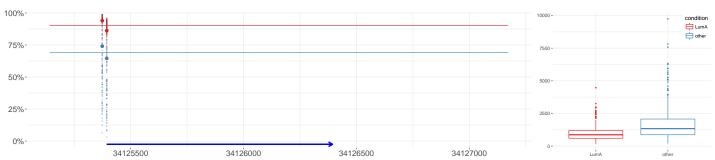
Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.2
 0.9
 0.9
 0.9
 1
 1
 139

 other
 0
 0.5
 0.8
 0.7
 0.9
 1
 153





### MSLN

Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 0 7.2 14.4 195.1 30.2 23631.9 359

other 0 5.5 21.1 2466.8 360.3 221515.9 377

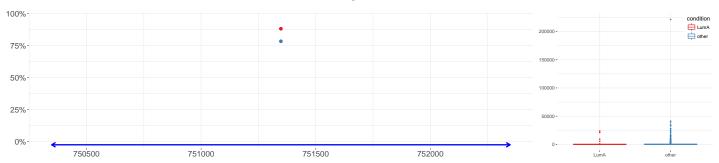
 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.6
 0.9
 0.9
 0.9
 0.9
 0.9
 139

 other
 0.3
 0.7
 0.9
 0.8
 0.9
 1
 153

### **MSLN**

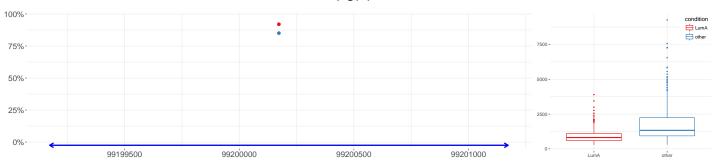


### POP1

Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	289.6	596.6	814.4	922.3	1104	3892.2	359
other	302.5	933 4	1329 2	1774 3	2237 7	9263 4	377

# Methylation min 1st Q med mean 3rd Q max count LumA 0.6 0.9 0.9 0.9 1 1 139 other 0.3 0.8 0.9 0.9 0.9 1 153

### POP1



### RLBP1

Expression (cpm)

min 1st Q med mean 3rd Q max count

LumA 0 0 0 58.5 90.5 452.7 359

other 0 0 45.3 2596.8 226.3 150778.6 377

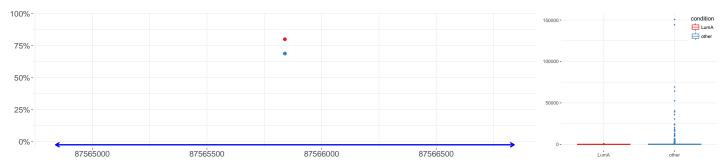
 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.5
 0.7
 0.8
 0.8
 0.9
 0.9
 139

 other
 0.1
 0.6
 0.8
 0.7
 0.8
 0.9
 153

### RLBP1



### ROPN1

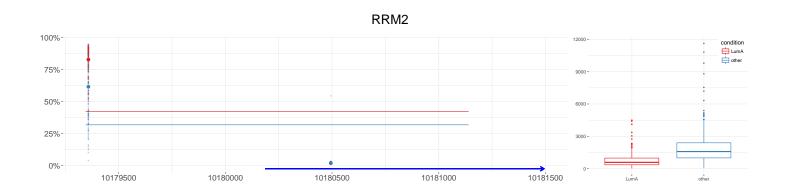
Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	0	12.3	43.1	101.7	116.9	1203.1	359
other	0	15.4	58.5	2555.7	1221.6	58956.9	377

# Methylation min 1st Q med mean 3rd Q max count LumA 0.4 0.5 0.6 0.6 0.8 139 other 0.2 0.5 0.5 0.5 0.6 0.7 153

### 

### RRM2

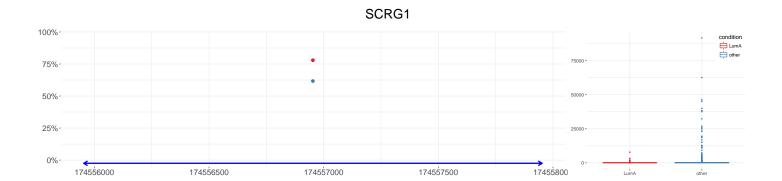
#### Methylation min 1st Q med mean 3rd Q max count **LumA** 0.2 0.4 0.4 0.4 0.5 0.5 139 0.3 0.7 153 other 0 0.2 0.3 0.4



### SCRG1

Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	0	28.7	61.3	144.9	128.4	7832.1	359
other	0	30.7	65.1	2514.6	333.4	91743.7	377

Methylation									
min 1st Q med mean 3rd Q max co									
LumA	0.1	0.7	8.0	8.0	0.9	0.9	139		
other	0.1	0.4	0.7	0.6	0.9	0.9	153		



### SLC6A11

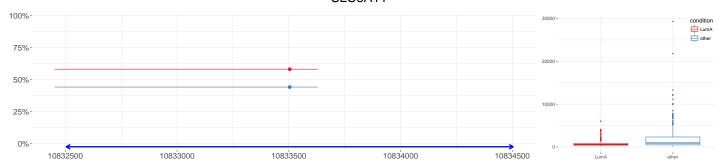
 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.1
 0.5
 0.6
 0.6
 0.7
 0.9
 139

 other
 0.1
 0.3
 0.4
 0.4
 0.6
 0.9
 153

### SLC6A11

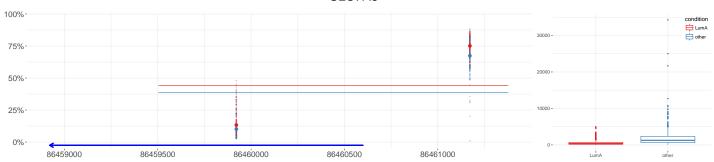


### SLC7A5

Expression (cpm)							
	min	1st Q	med	mean	3rd Q	max	count
LumA	24.3	180.5	346.7	577	687.1	4937.8	359
other	73.8	630 4	1260.5	2103	2354 4	34263.2	377

# | Methylation | | min | 1st Q | med | mean | 3rd Q | max | count | | LumA | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 139 | other | 0.1 | 0.3 | 0.4 | 0.4 | 0.4 | 0.6 | 153 |

### SLC7A5



### SRD5A1

 Expression (cpm)

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 125.5
 459
 655.4
 807.9
 929.3
 8657
 359

 other
 120.7
 698.4
 1109.7
 1883.2
 2158.6
 34485.4
 377

 Methylation

 min
 1st Q
 med
 mean
 3rd Q
 max
 count

 LumA
 0.2
 0.8
 0.8
 0.9
 0.9
 139

 other
 0.1
 0.6
 0.7
 0.7
 0.8
 0.9
 153

### SRD5A1

