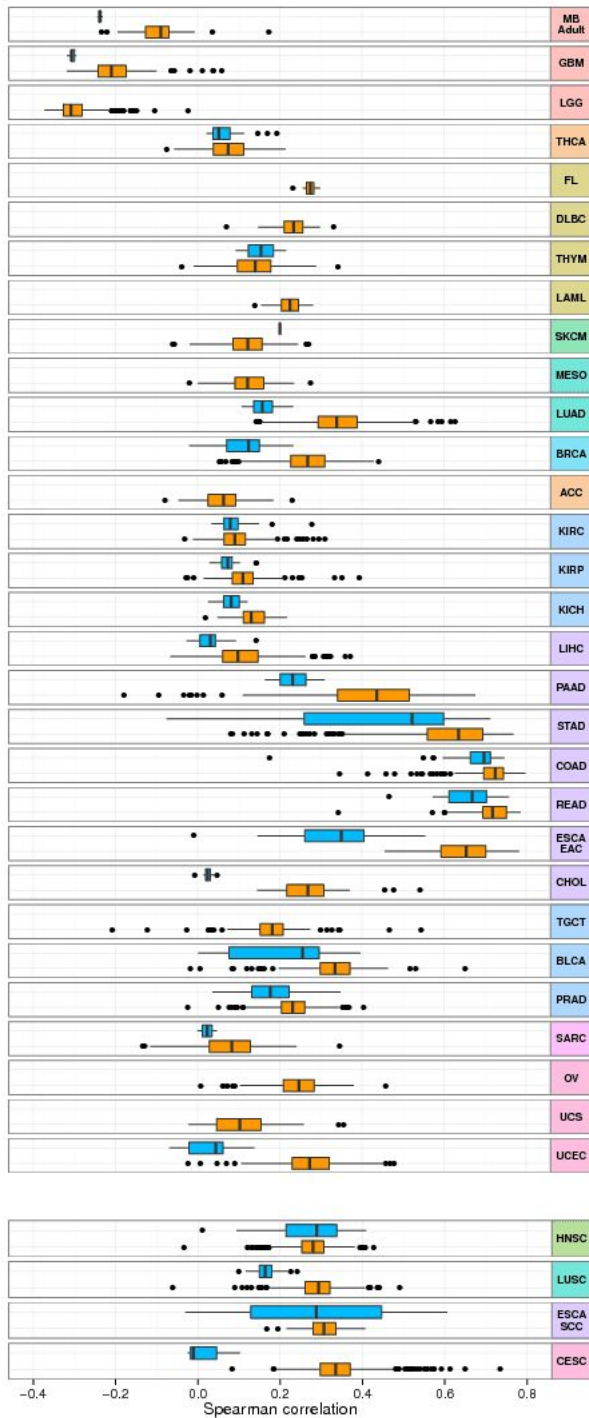


# EXPRESSION ANALYSIS

This section provides details of the expression analyses performed as part of the POG pipeline. Look in this section for details about expression comparator choice and potentially relevant genes determined to be significant expression outliers.

## EXPRESSION ANALYSIS

### SPEARMAN CORRELATION WITH AVAILABLE EXPRESSION DATASETS



#### POG129\_P00281 expression correlation

3000 of 3000 minrpkm\_0.2-LOGANOVA3000 genes;  
includes TCGA and reference cancer disease types

cancer normal

- Central Nervous System
- Head and Neck
- Breast
- Soft Tissue
- Endocrine
- Skin
- Urologic
- Gynecologic
- Hematologic
- Thoracic
- Gastrointestinal

Normal Expression Comparator      Disease Expression Comparator

unknown

TCGA

## EXPRESSION ANALYSIS

## EXPRESSION LEVEL OUTLIERS OF POTENTIAL CLINICAL RELEVANCE

Gene	Location	Copy Change	LOH state	CNV State	Expression (RPKM)	Fold Change vs. unknown	TCGA %ile
PTEN	10:89622870-89731687	0	HET	Neutral	4.4	-4.32	2
PTEN	10:89622870-89731687	na	HET	Neutral	na	na	na

## EXPRESSION LEVEL OUTLIERS OF PROGNOSTIC OR DIAGNOSTIC RELEVANCE

Gene	Location	Copy Change	LOH State	CNV State	Expression (RPKM)	Fold Change vs. unknown	TCGA %ile
PTEN	10:89622870-89731687	+1	HET	Neutral	4.4	-4.32	2

## EXPRESSION LEVEL OUTLIERS OF BIOLOGICAL RELEVANCE

Gene	Location	Copy Change	LOH State	CNV State	Expression (RPKM)	Fold Change vs. unknown	TCGA %ile
PTEN	10:89622870-89731687	0	HET	Neutral	4.4	-4.32	2
PTEN	10:89622870-89731687	na	HET	Neutral	na	na	na

## EXPRESSION ANALYSIS

## DRUG TARGETABLE HIGH PERCENTILE GENES

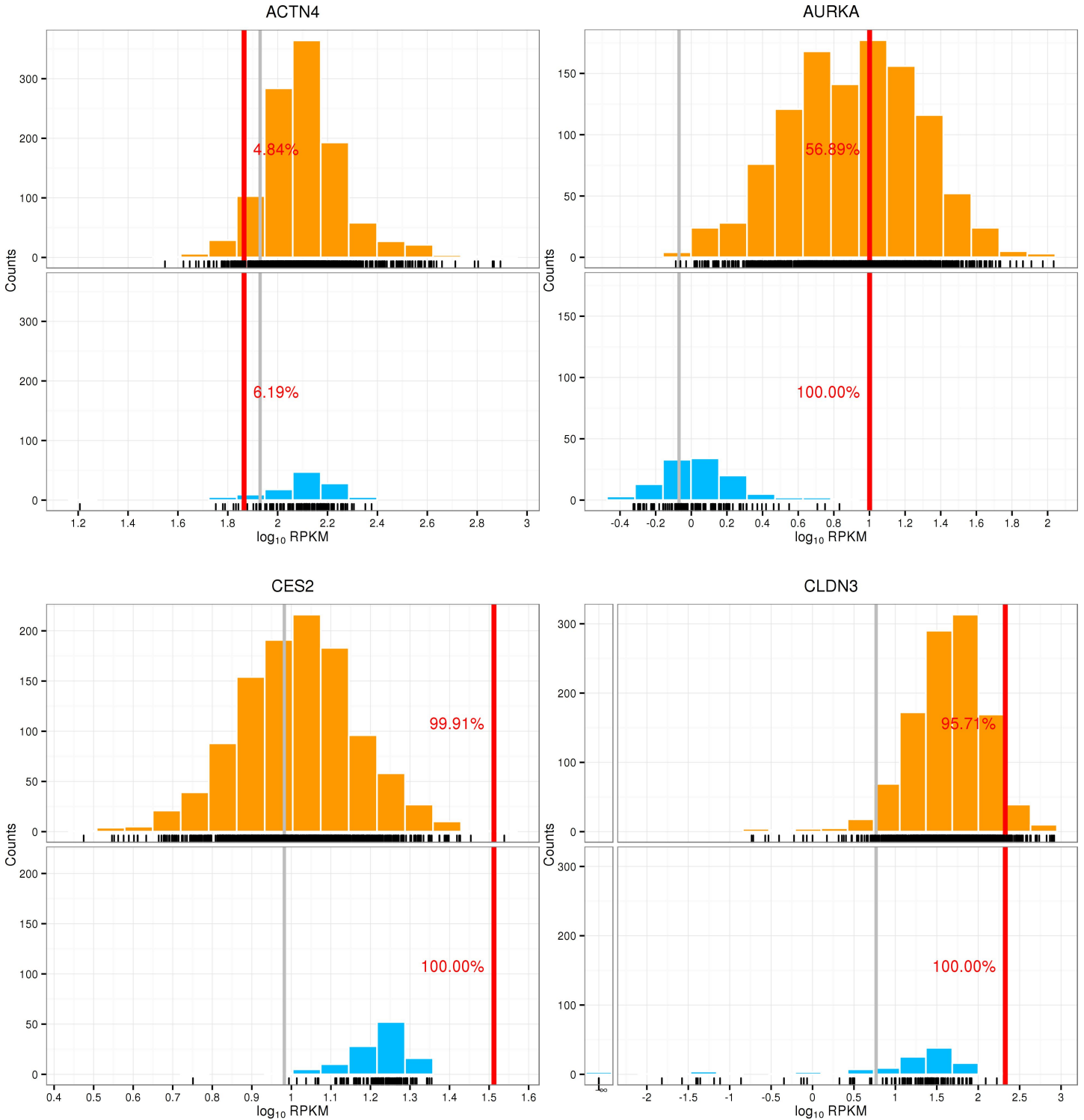
Gene	Interaction Category	LOH Region	Copy #	KiQR	TCGA %ile	Fold Change vs. unknown
ADAM17	inhibitor	HET	na	na	99	2.05
ADRA1D	antagonist	HET	3	na	100	51.79
ADRB1	antagonist	HET	2	na	100	50.21
ADRB3	antagonist	ALOH	4	na	100	41.91
ALDH5A1	inhibitor	NLOH	2	na	100	1.73
ATP1A1	inhibitor	HET	2	na	100	5.17
ATP6V1A	inhibitor	HET	2	na	95	1.14
CA11	inhibitor	NLOH	2	na	94	2.06
CA14	inhibitor	HET	3	na	97	3.15
CA7	inhibitor	NLOH	2	na	100	1.81
CACNA1F	inhibitor	DLOH	1	na	100	1.15
CACNA1G	inhibitor	HET	2	na	92	6.54
CDK1	inhibitor	HET	2	na	91	9.9
CHEK1	inhibitor	DLOH	1	na	93	4.68
CPT1A	inhibitor	DLOH	2	na	99	4.63
CPT2	inhibitor	HET	2	na	100	3.66
CSNK2A1	inhibitor	HET	3	na	100	1.9
DBH	inhibitor	NLOH	2	na	97	1.08
DHFR	inhibitor	DLOH	1	na	99	8.32
GANC	antagonist	HET	2	na	98	1.56
GNRHR	antagonist	HET	2	na	99	1.09
GRIN3B	antagonist	HET	2	na	99	2.7
GSR	inhibitor	ALOH	4	na	100	4.76
HDAC2	inhibitor	HET	2	na	98	6.25
HSP90AA1	inhibitor	DLOH	1	na	100	2.64
JAK1	inhibitor	HET	2	na	100	5.28
KCNH6	inhibitor	HET	2	na	100	2.55
KCNN1	inhibitor	HET	3	na	99	5.35
MAP2K7	inhibitor	HET	3	na	93	2.26
MMP21	inhibitor	HET	2	na	93	1.08
NAIP	antagonist	DLOH	2	na	99	1.44
NPY1R	antagonist	HET	2	na	100	22.53
NPY5R	antagonist	HET	2	na	100	23.66
PDE4A	inhibitor	HET	2	na	93	2.91
PDE4B	inhibitor	HET	2	na	91	2.18
PDE4C	inhibitor	HET	2	na	92	1.28
PLK1	inhibitor	HET	3	na	95	22.28
POLE3	inhibitor	NLOH	2	na	100	3.96
PPAT	inhibitor	HET	2	na	95	3.14
PRKCB	inhibitor	HET	3	na	100	16.64
PRKCI	inhibitor	HET	2	na	94	1.36
PRKD3	inhibitor	HET	2	na	100	2.26
PSMB2	antagonist/inhibitor	HET	2	na	100	1.83
PSMD1	inhibitor	HET	2	na	100	3.57
PTAFR	antagonist	HET	2	na	97	1.38

## EXPRESSION ANALYSIS

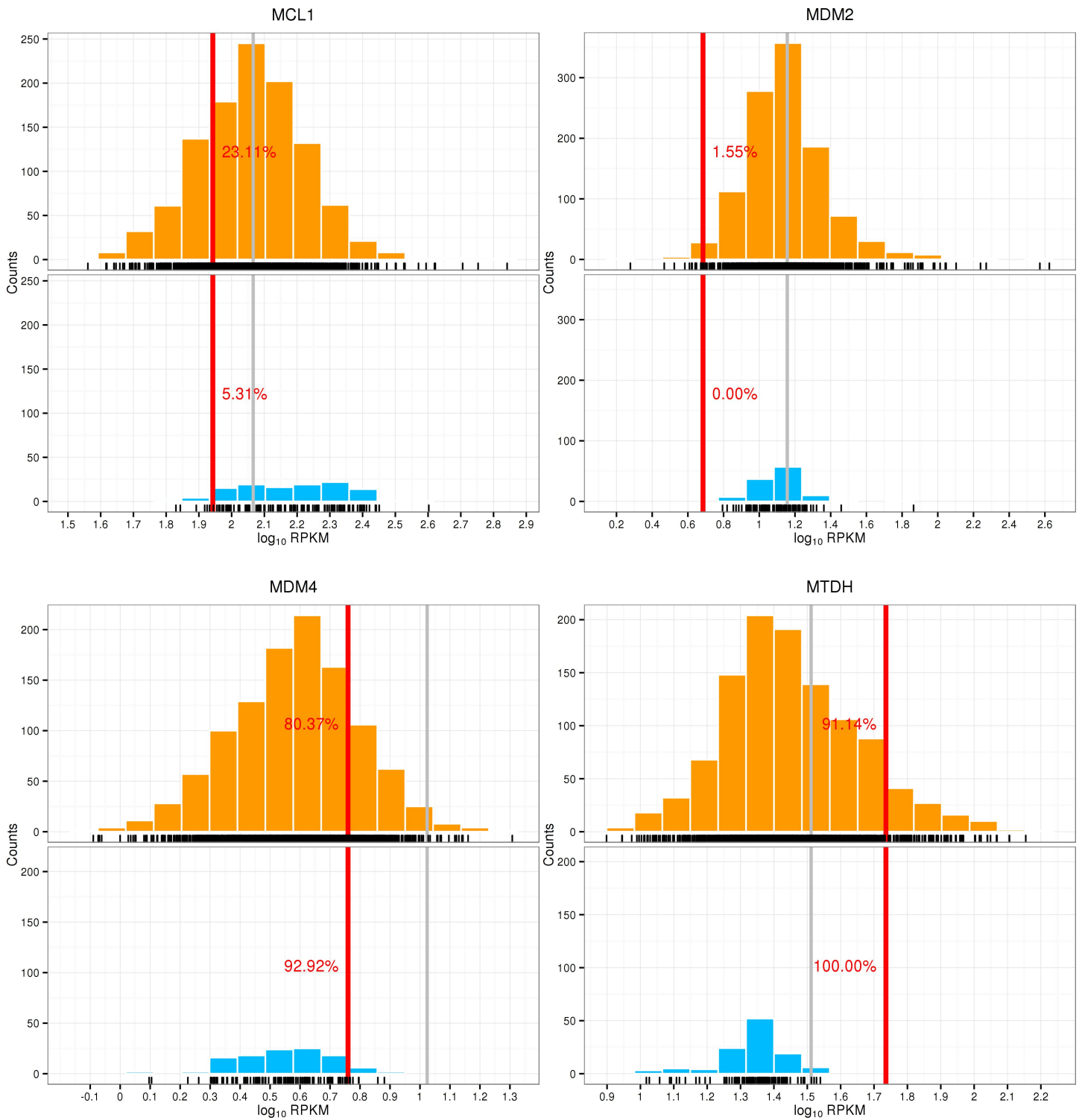
Gene	Interaction Category	LOH Region	Copy #	klQR	TCGA %ile	Fold Change vs. unknown
RRM1	inhibitor	NLOH	2	na	95	3.66
SCN9A	inhibitor	HET	2	na	94	1.43
SCNN1G	inhibitor	HET	3	na	100	4.88
SLC5A2	antagonist/inhibitor	HET	3	na	100	1.83
SLC7A11	inhibitor	HET	2	na	95	1.4
TOP1	inhibitor	HET	3	na	100	3.17
TOP2A	inhibitor	HET	2	na	98	30.1
XIAP	antagonist	DLOH	1	na	100	1.85

EXPRESSION ANALYSIS

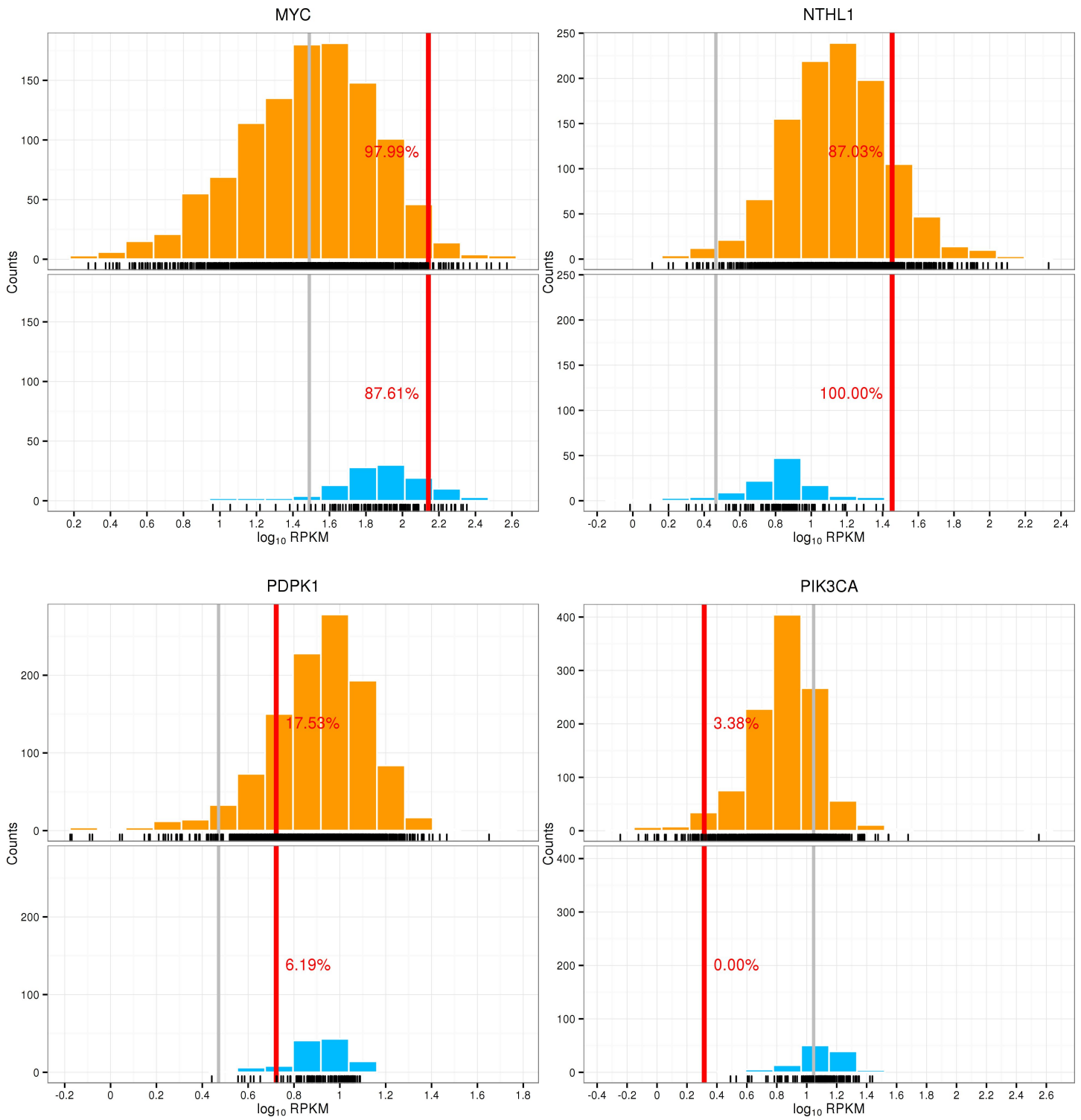
EXPRESSION DISTRIBUTIONS



EXPRESSION ANALYSIS



EXPRESSION ANALYSIS



EXPRESSION ANALYSIS

