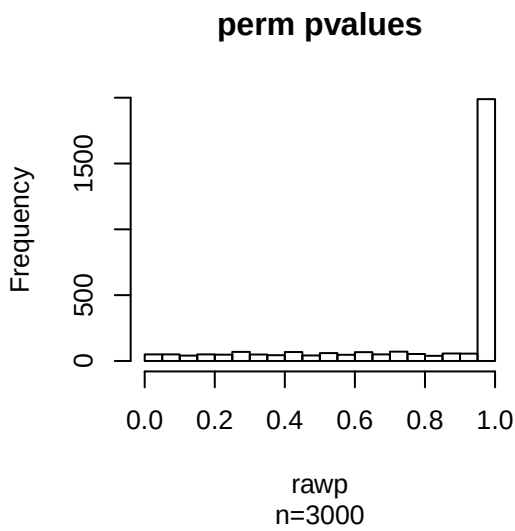
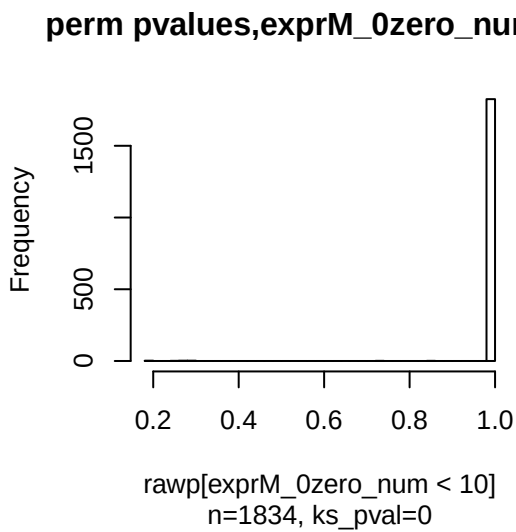
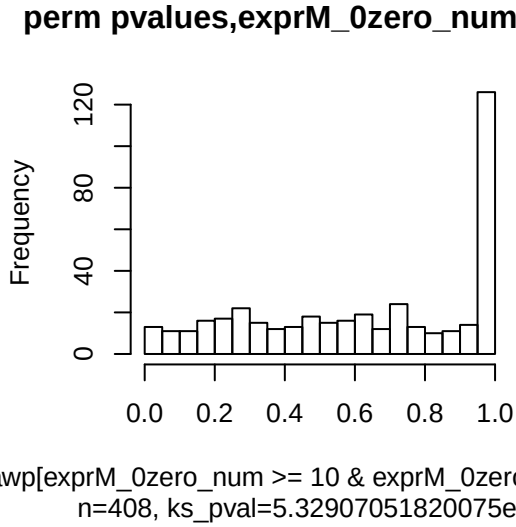
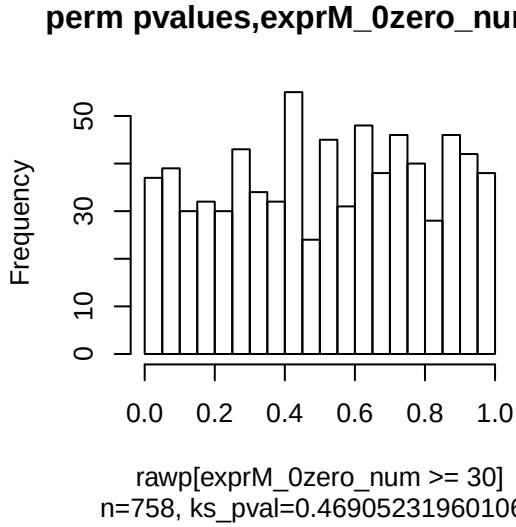
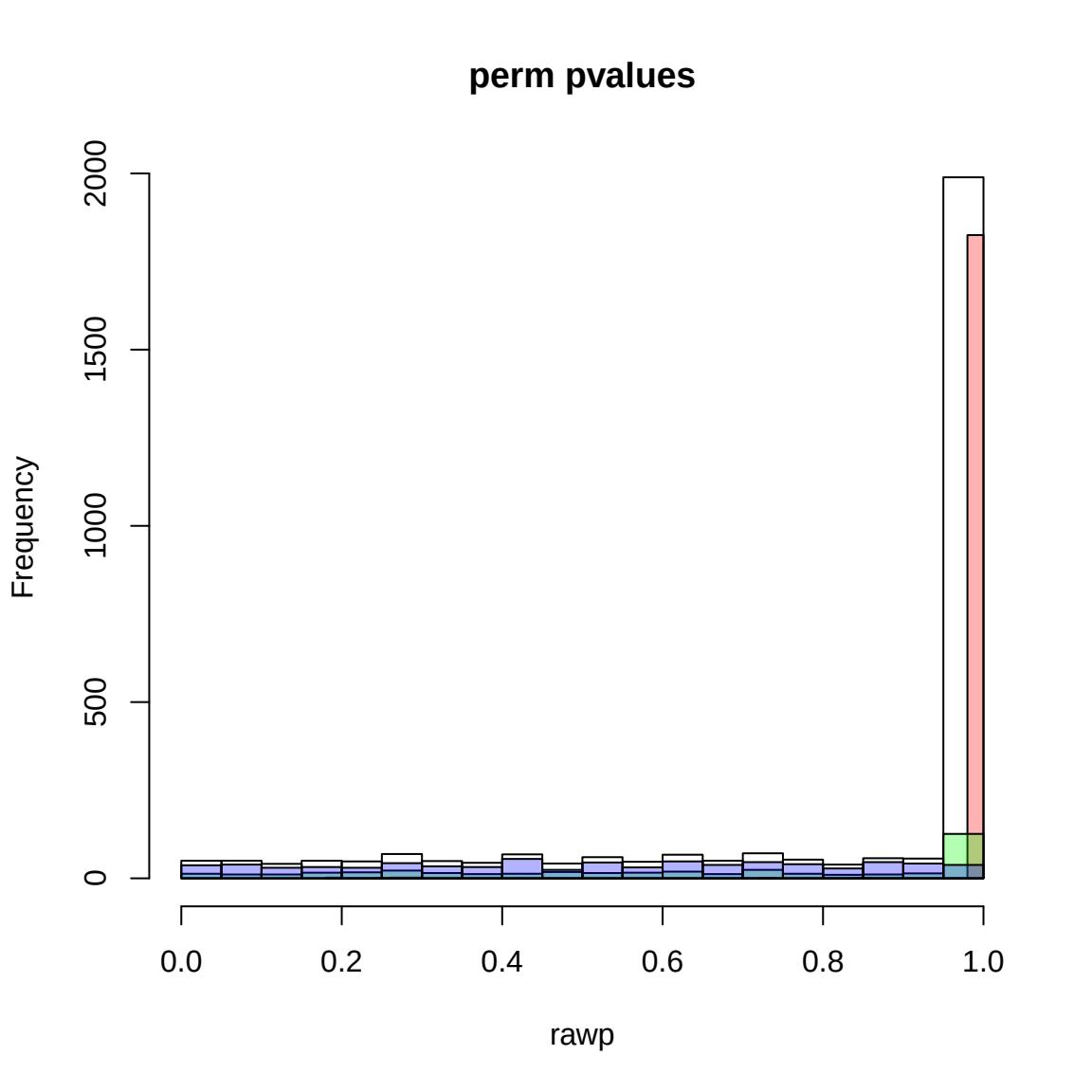
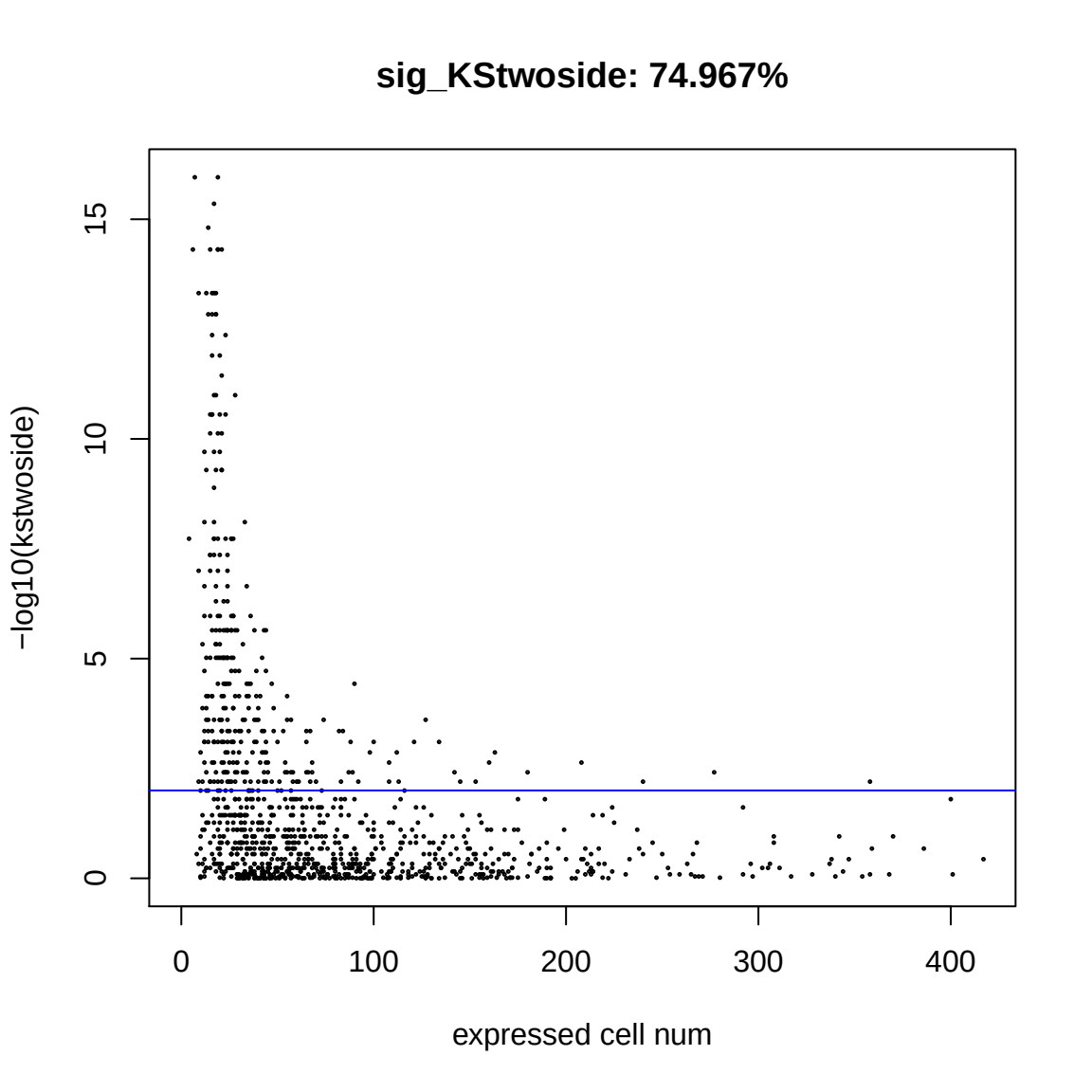

perm pvalues
Frequency
0
500
1500
0.0
0.2
0.4
0.6
0.8
1.0
rawp
n=3000

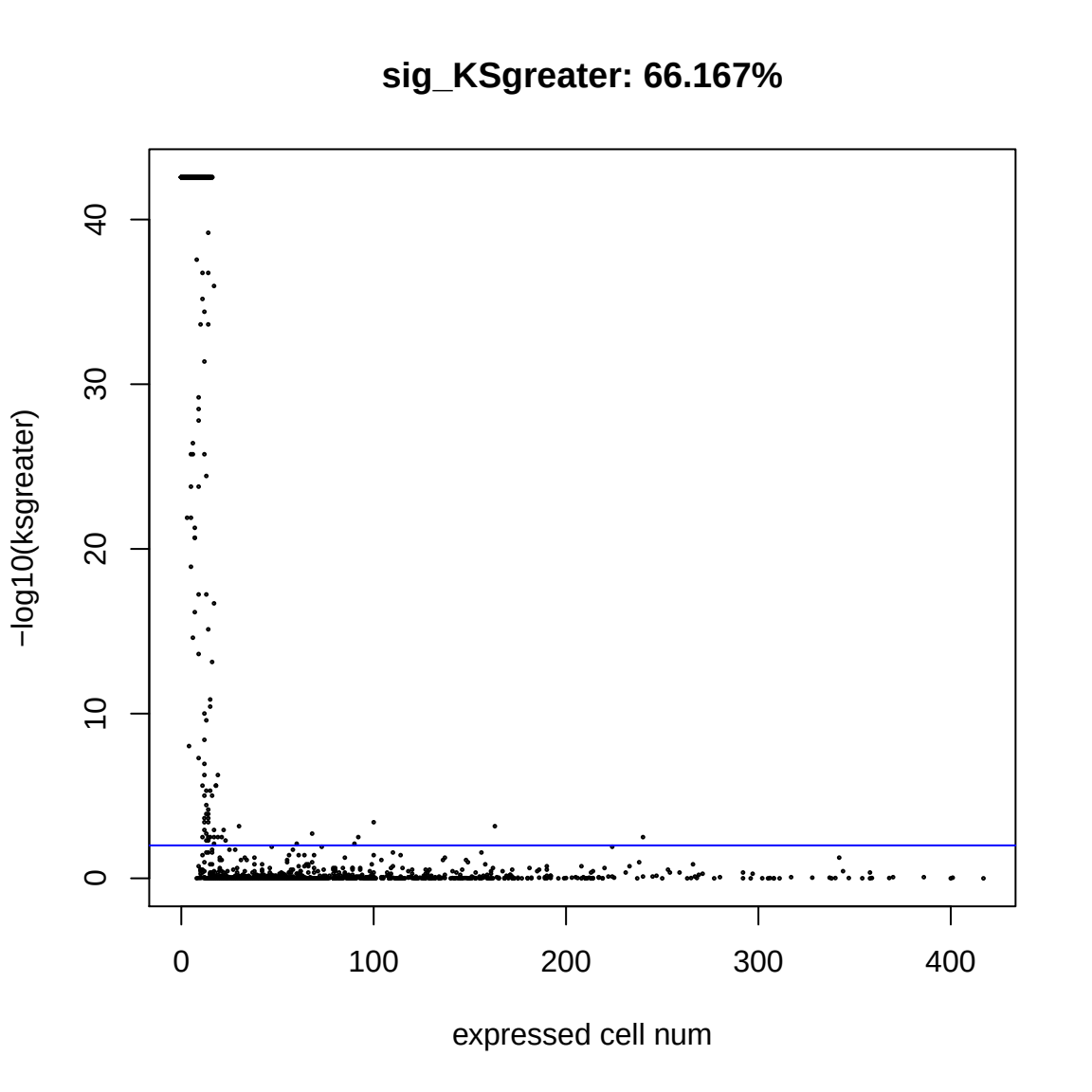

perm pvalues,exprM_0zero_num<1
Frequency
0
500
1500
0.2
0.4
0.6
0.8
1.0
rawp[exprM_0zero_num < 10]
n=1834, ks_pval=0

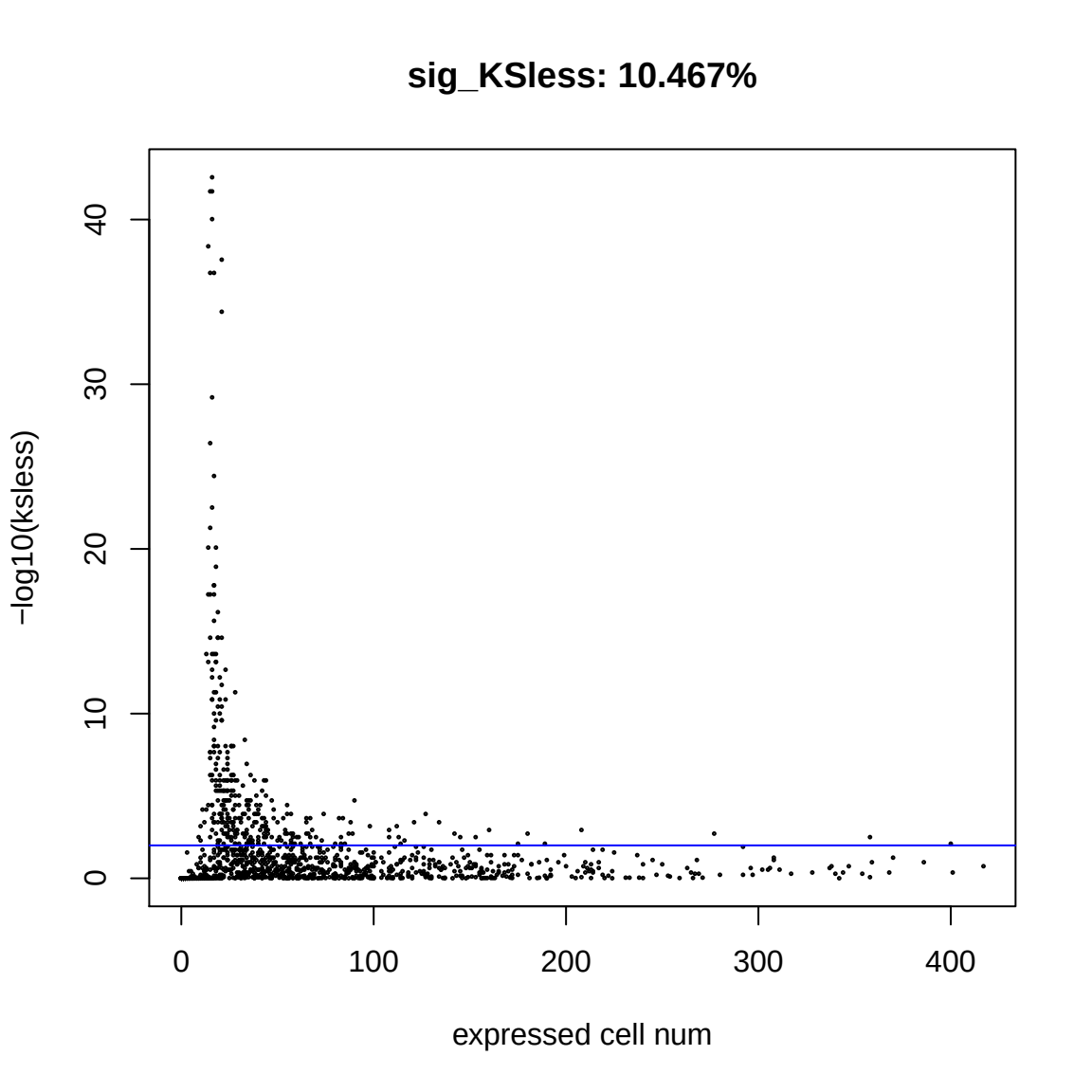

perm pvalues,exprM_0zero_num 10−
Frequency
0
40
80
120
0.0
0.2
0.4
0.6
0.8
1.0
awp[exprM_0zero_num >= 10 & exprM_0zero_nu
n=408, ks_pval=5.32907051820075e−15

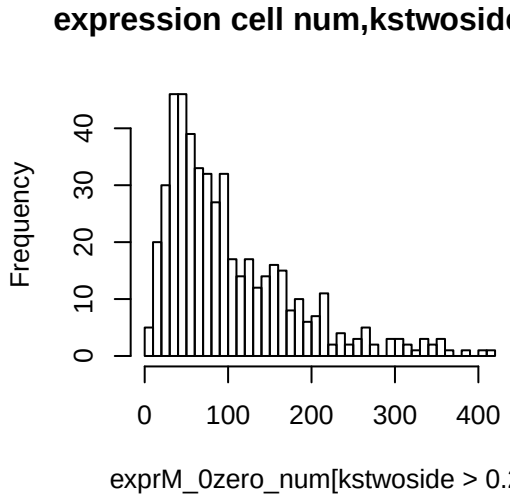

perm pvalues,exprM_0zero_num>3
Frequency
0
10
30
50
0.0
0.2
0.4
0.6
0.8
1.0
rawp[exprM_0zero_num >= 30]
n=758, ks_pval=0.469052319601066

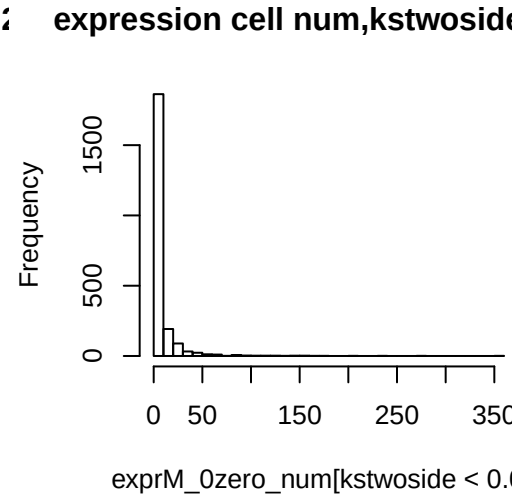

perm pvalues
Frequency
0
500
1000
1500
2000
0.0
0.2
0.4
0.6
0.8
1.0
rawp

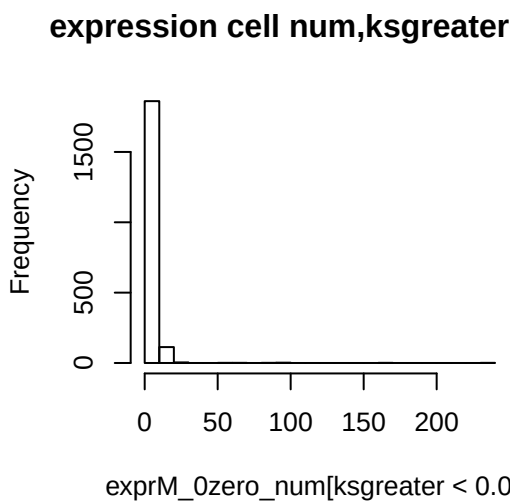

sig_KStwoside: 74.967%
−log10(kstwoside)
0
5
10
15
0
100
200
300
400
expressed cell num

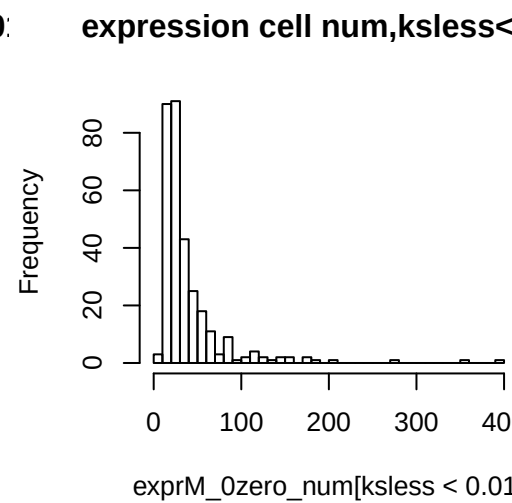

sig_KSgreater: 66.167%
−log10(ksgreater)
0
10
20
30
40
0
100
200
300
400
expressed cell num

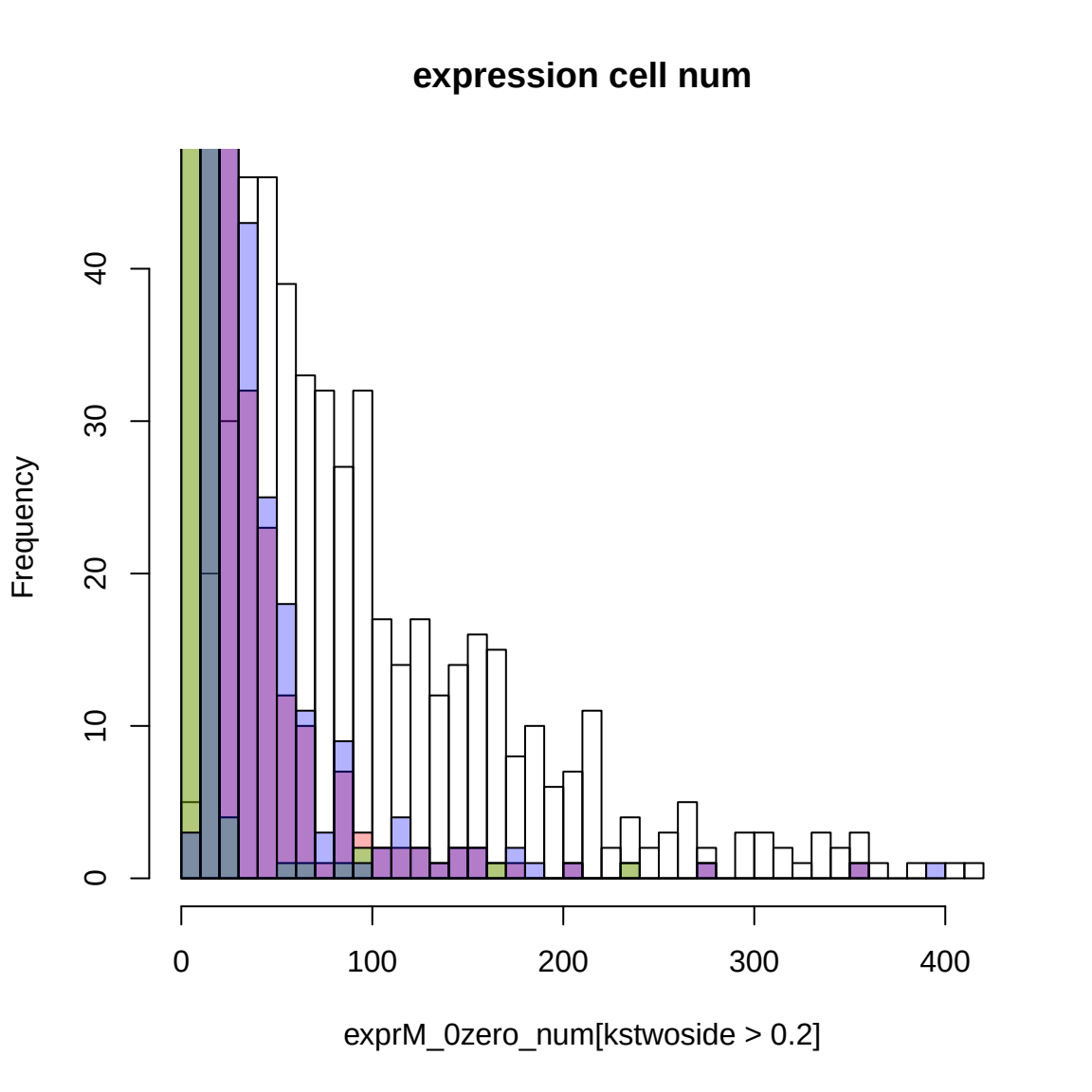

sig_KSless: 10.467%
−log10(ksless)
0
10
20
30
40
0
100
200
300
400
expressed cell num

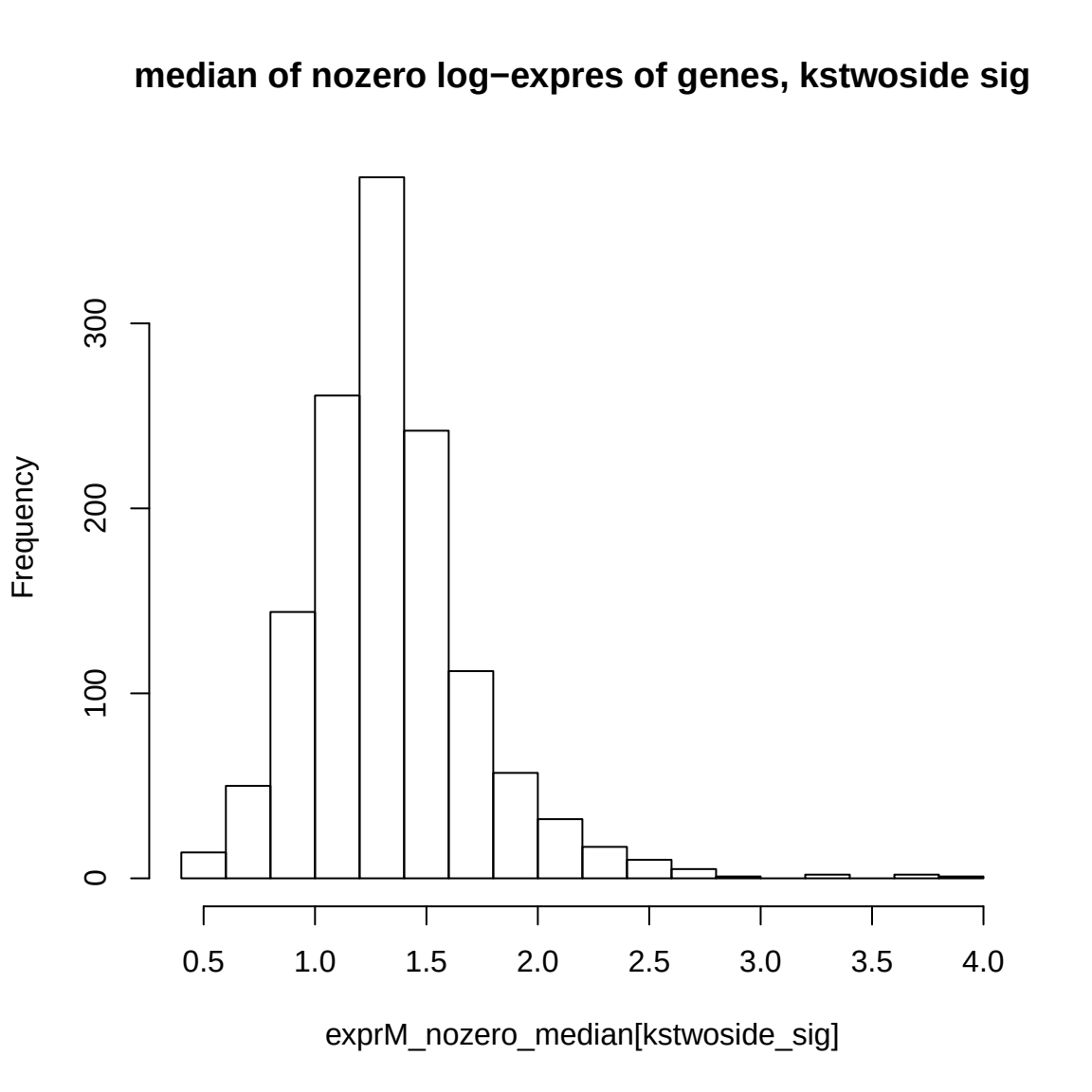

expression cell num,kstwoside>0.2
Frequency
0
10
20
30
40
0
100
200
300
400
exprM_0zero_num[kstwoside > 0.2]

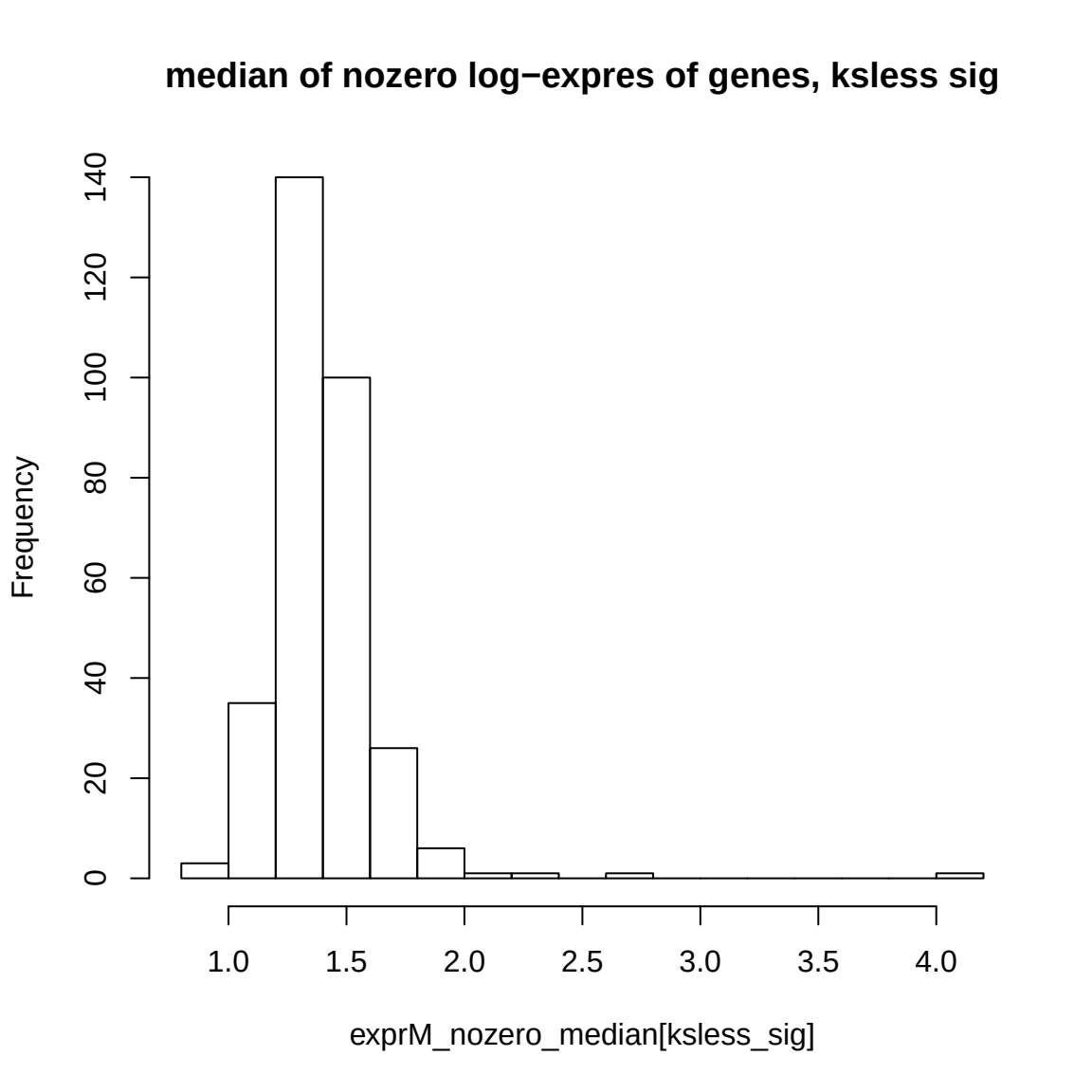

expression cell num,kstwoside<0.0
Frequency
0
500
1500
0
50
150
250
350
exprM_0zero_num[kstwoside < 0.01]

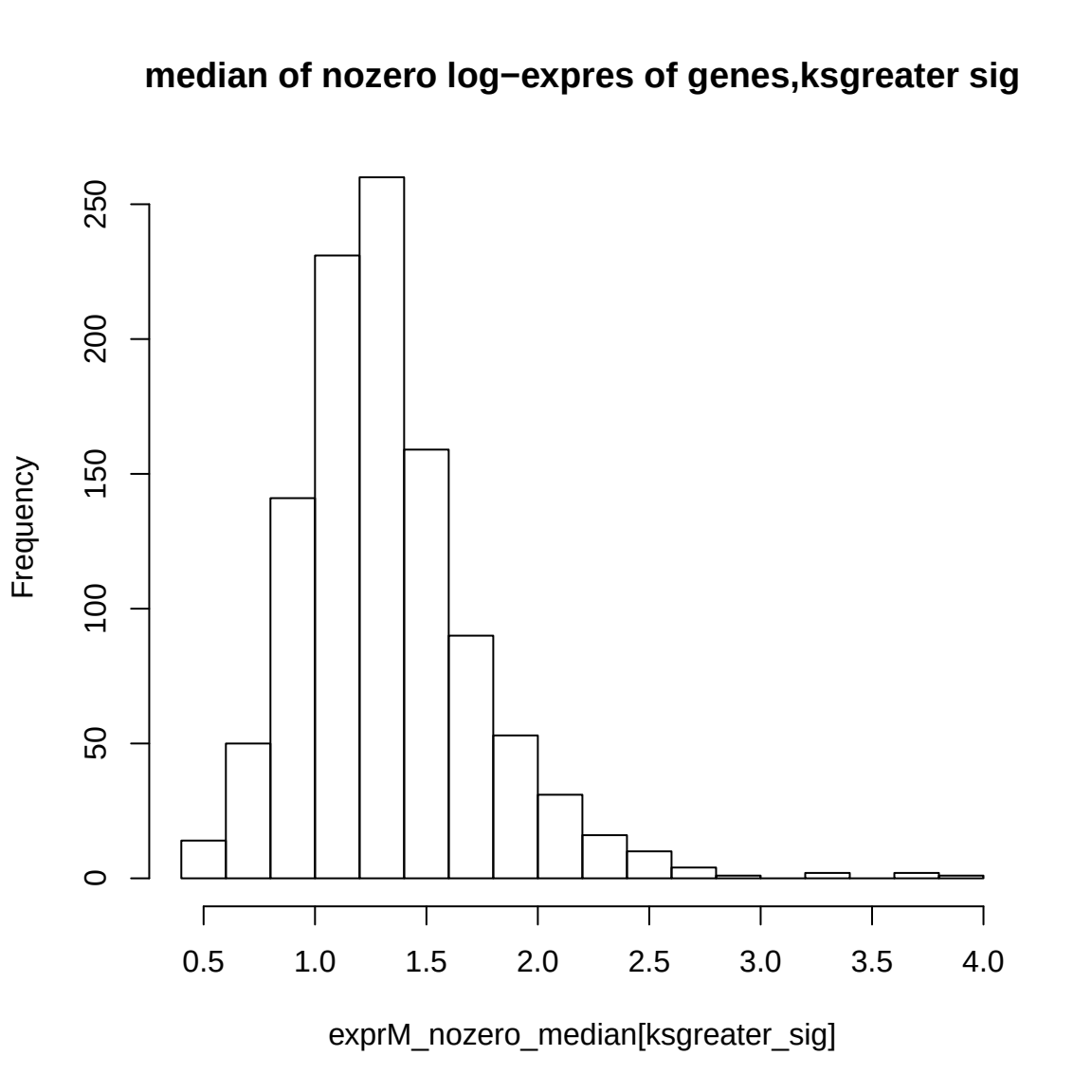

expression cell num,ksgreater<0.0
Frequency
0
500
1500
0
50
100
150
200
exprM_0zero_num[ksgreater < 0.01]

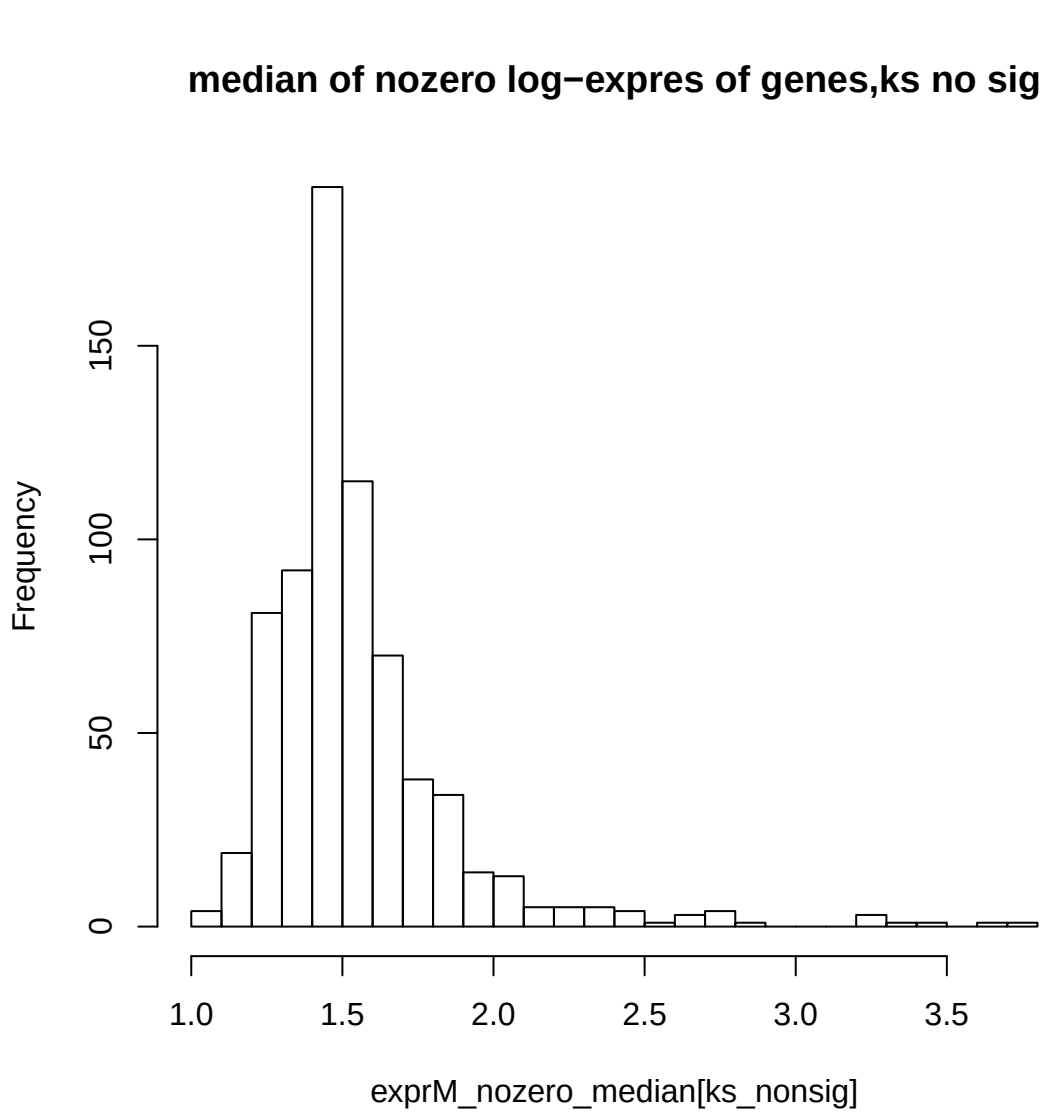

expression cell num,ksless<0.01
Frequency
0
20
40
60
80
0
100
200
300
400
exprM_0zero_num[ksless < 0.01]

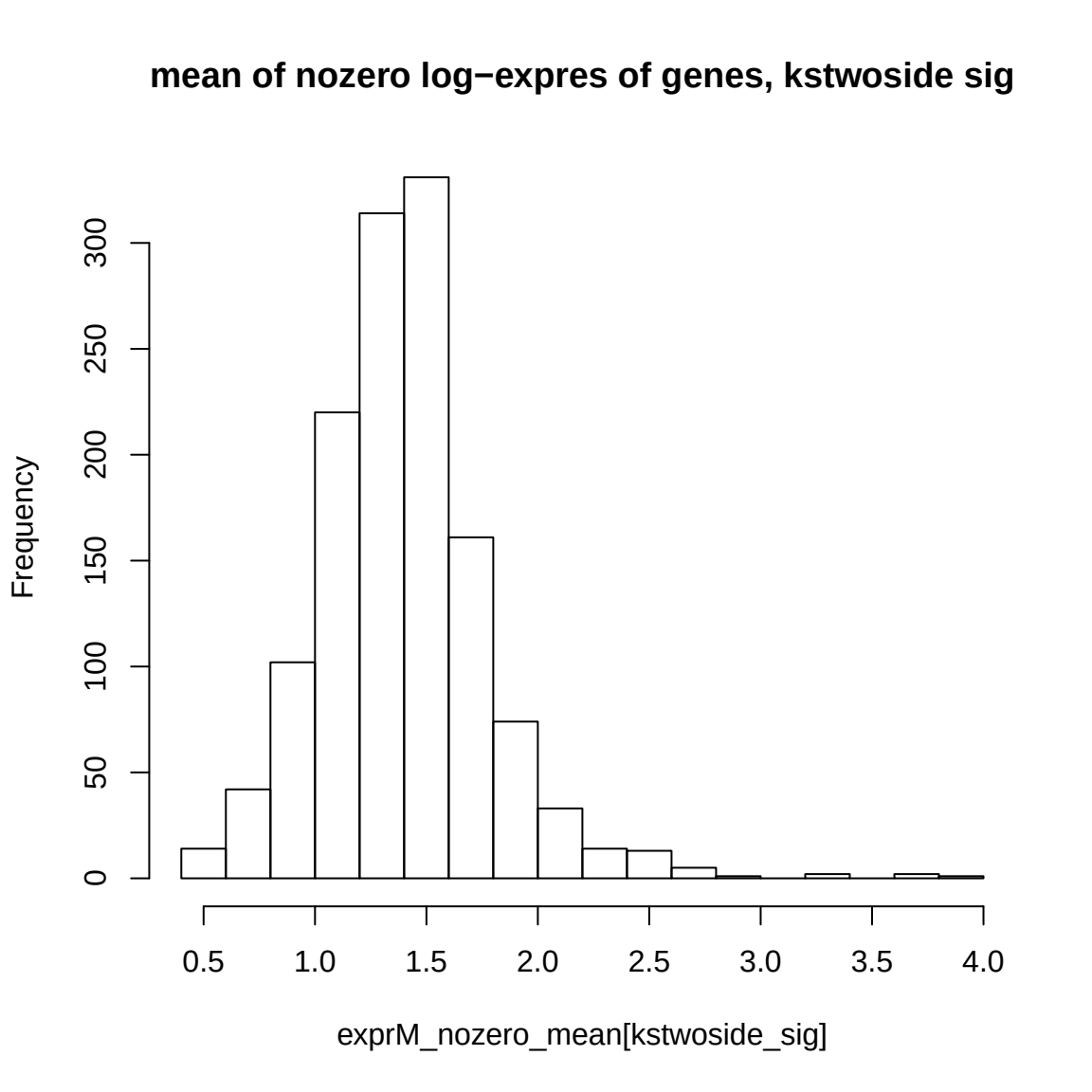

expression cell num
Frequency
0
10
20
30
40
0
100
200
300
400
exprM_0zero_num[kstwoside > 0.2]

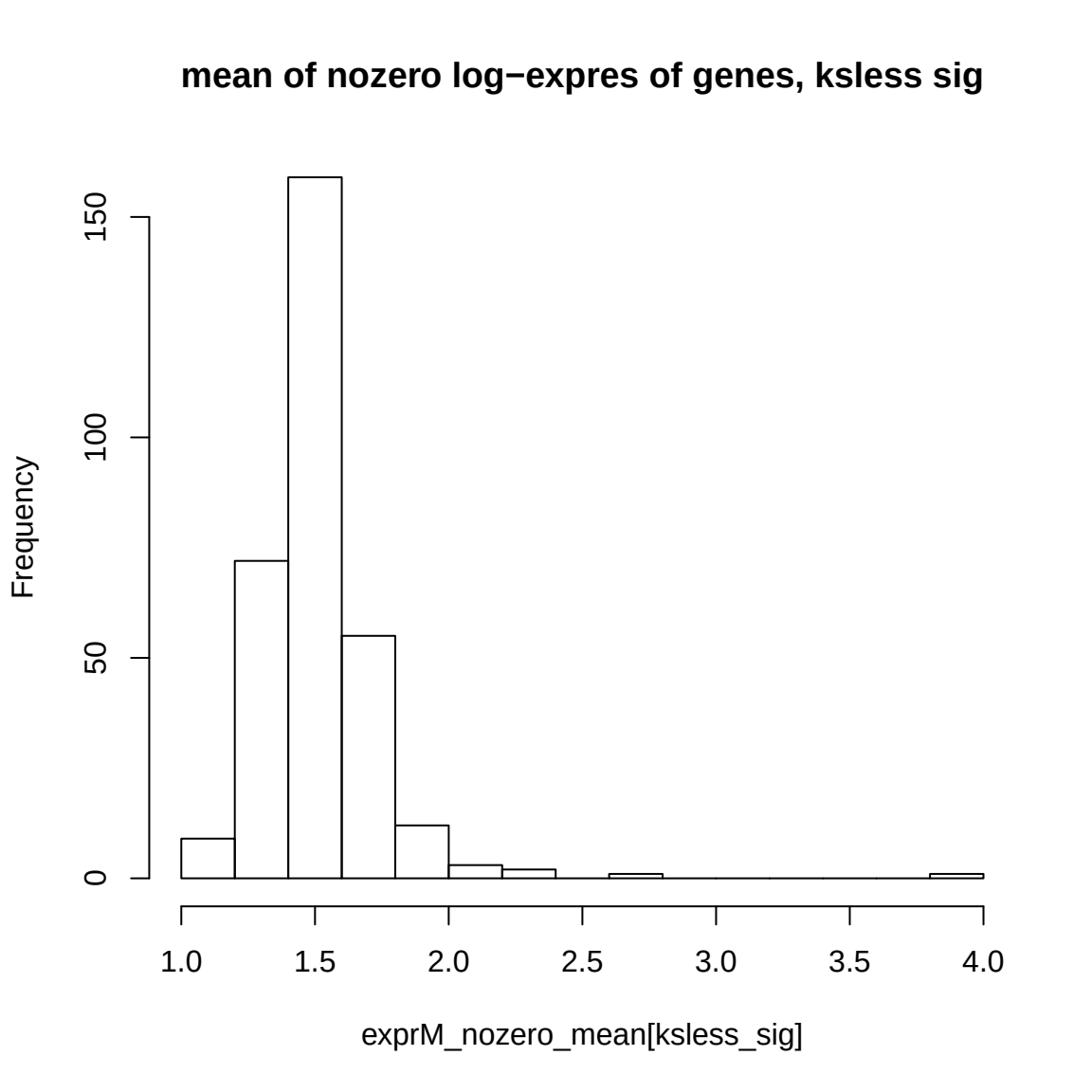

median of nozero log−expres of genes, kstwoside sig
Frequency
0
100
200
300
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_median[kstwoside_sig]

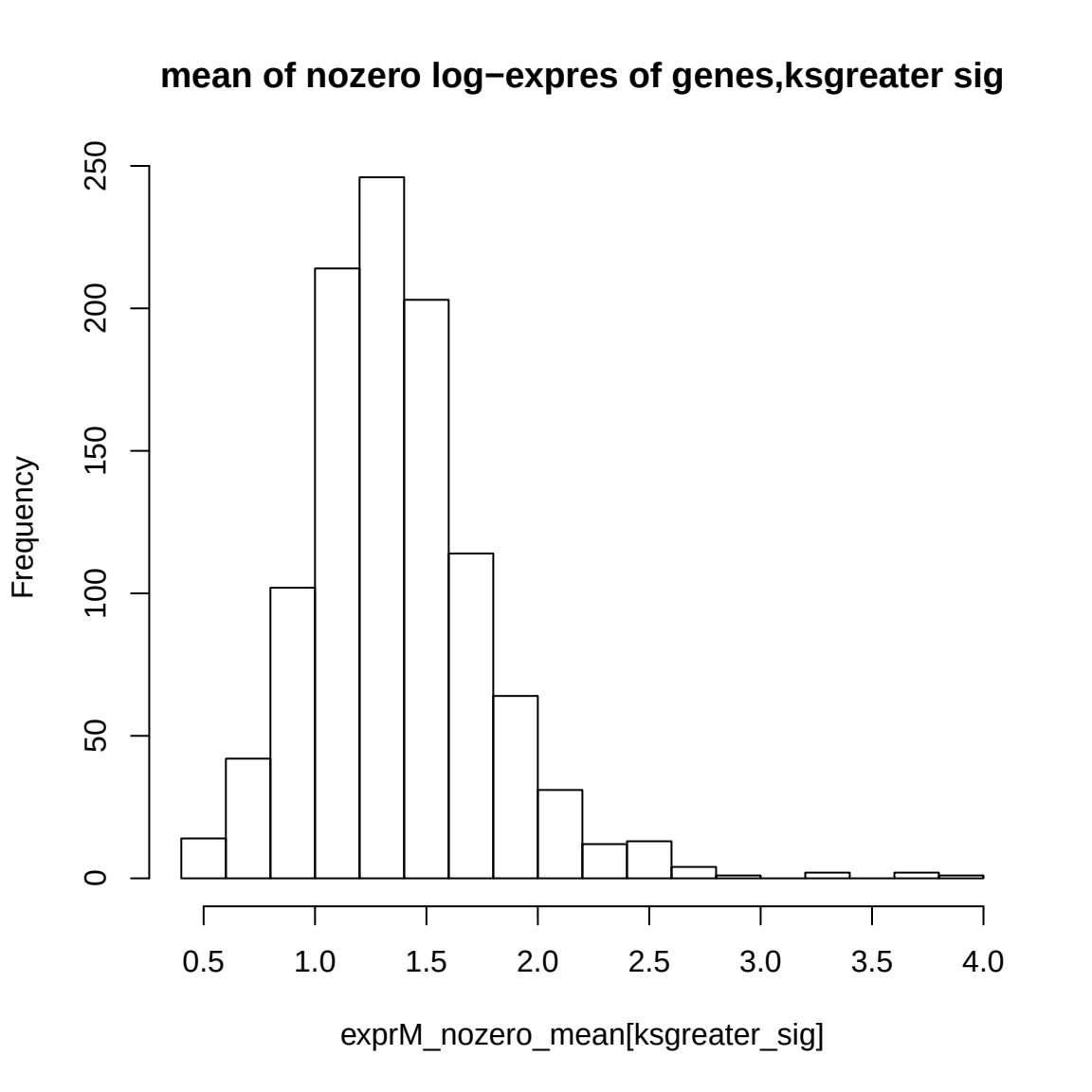

median of nozero log−expres of genes, ksless sig
Frequency
0
20
40
60
80
100
120
140
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_median[ksless_sig]

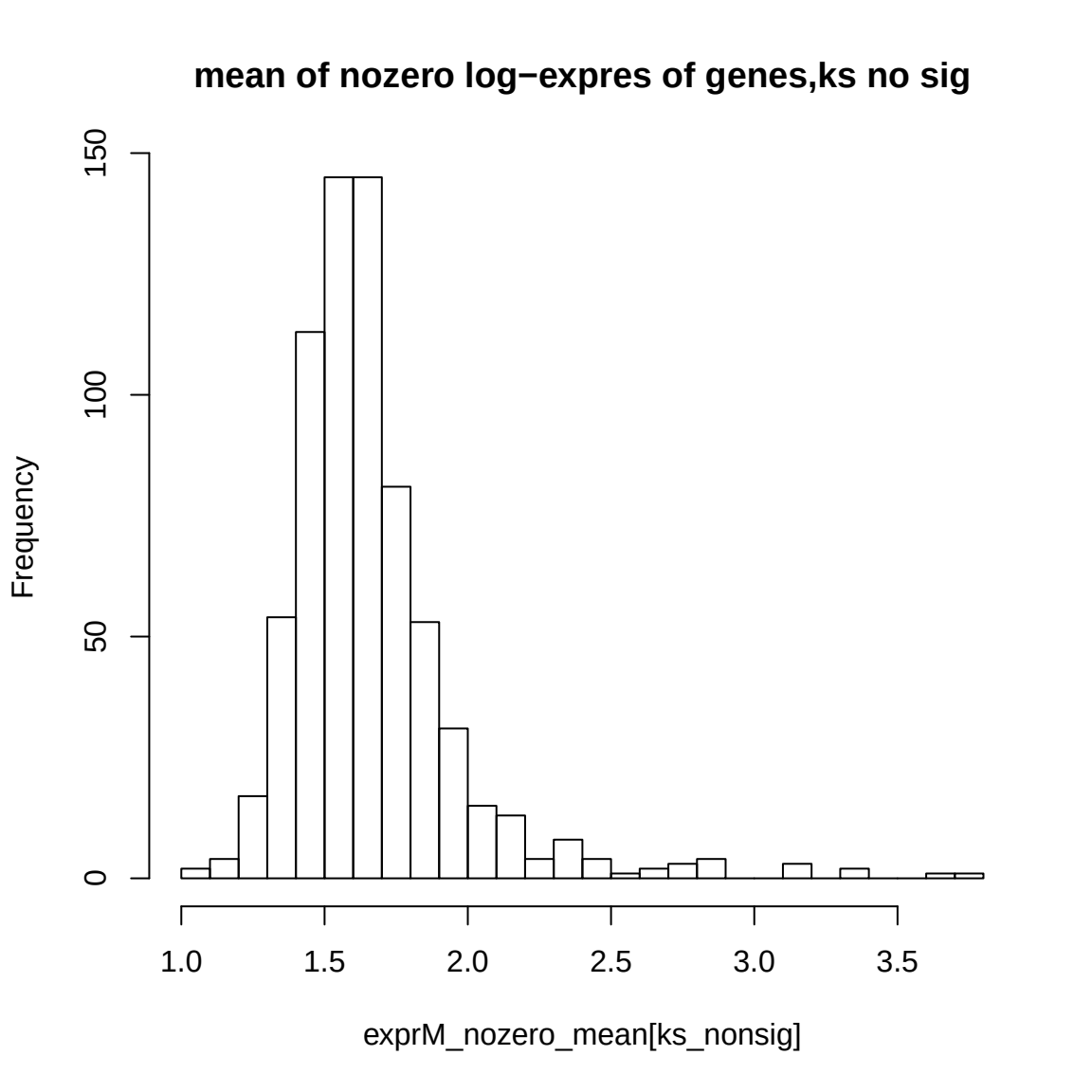

median of nozero log−expres of genes,ksgreater sig
Frequency
0
50
100
150
200
250
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_median[ksgreater_sig]

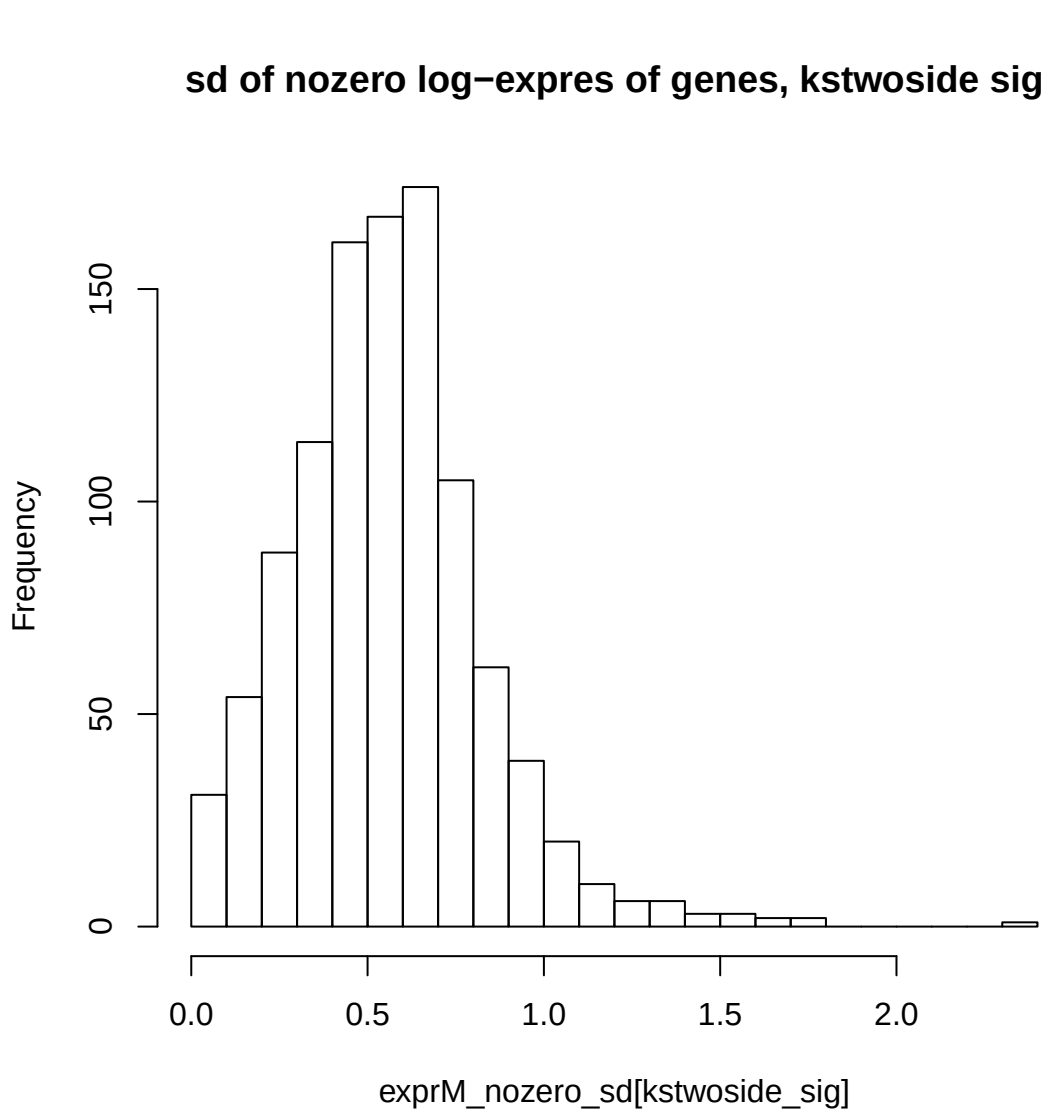

median of nozero log−expres of genes,ks no sig
Frequency
0
50
100
150
1.0
1.5
2.0
2.5
3.0
3.5
exprM_nozero_median[ks_nonsig]

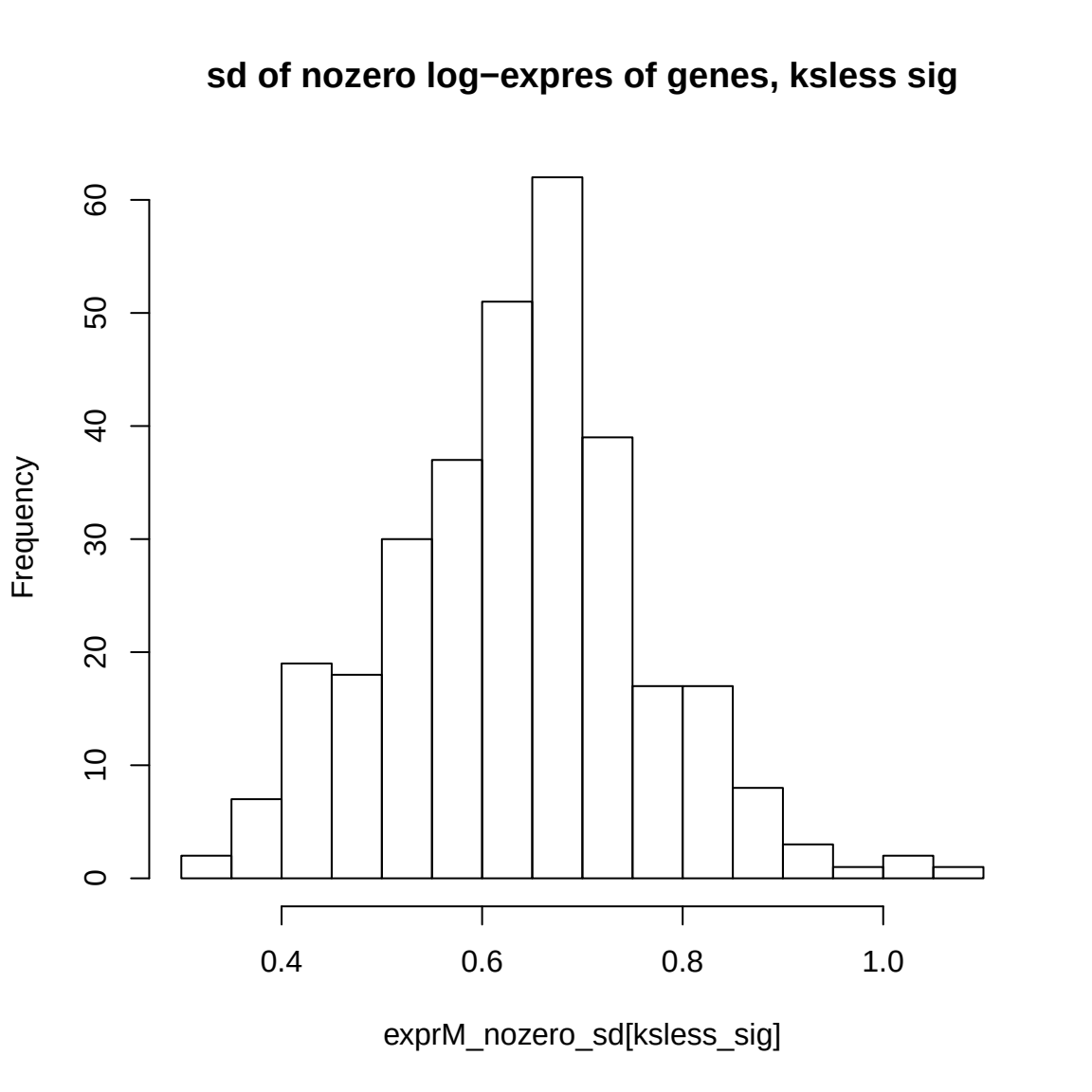

mean of nozero log−expres of genes, kstwoside sig
Frequency
0
50
100
150
200
250
300
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_mean[kstwoside_sig]

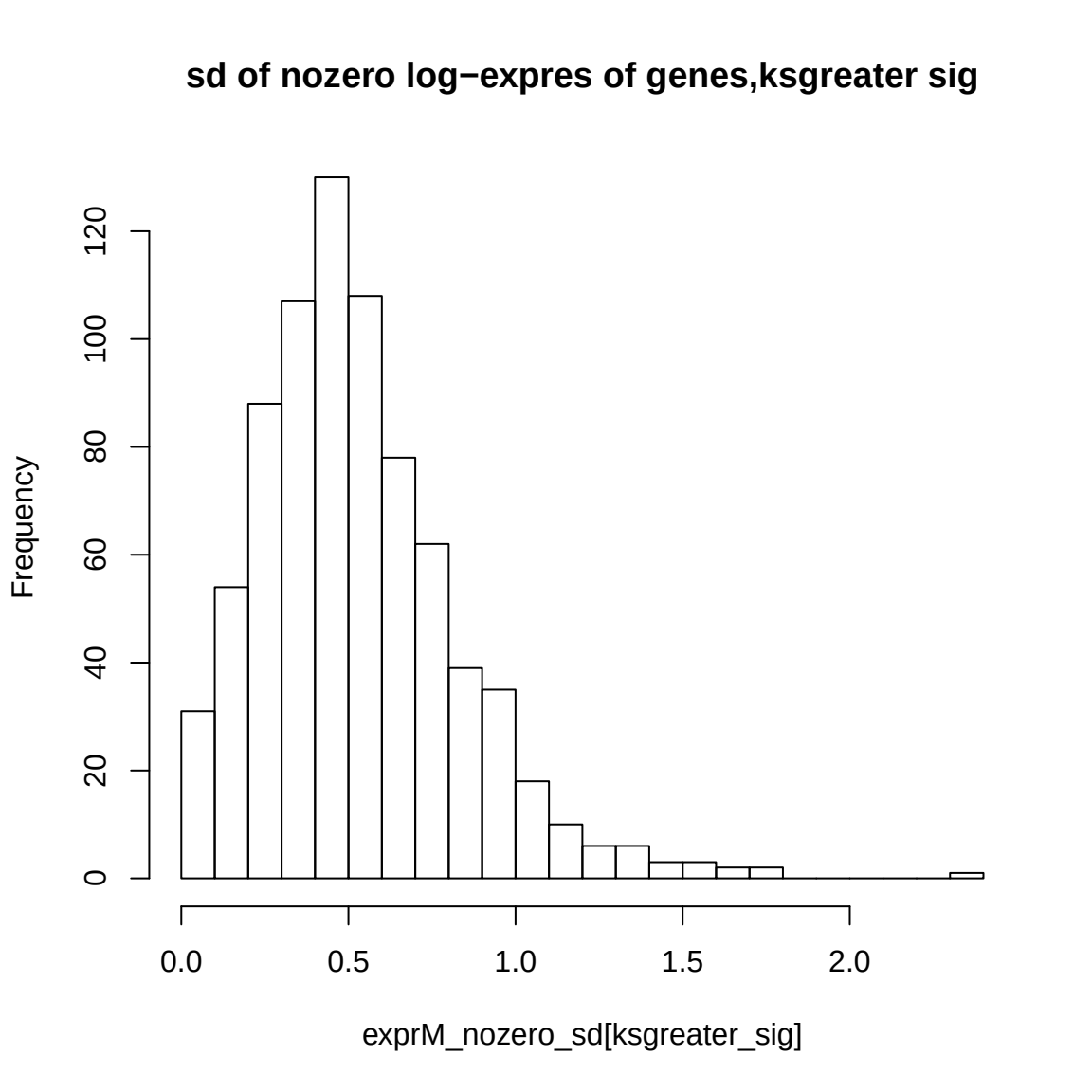

mean of nozero log−expres of genes, ksless sig
Frequency
0
50
100
150
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_mean[ksless_sig]

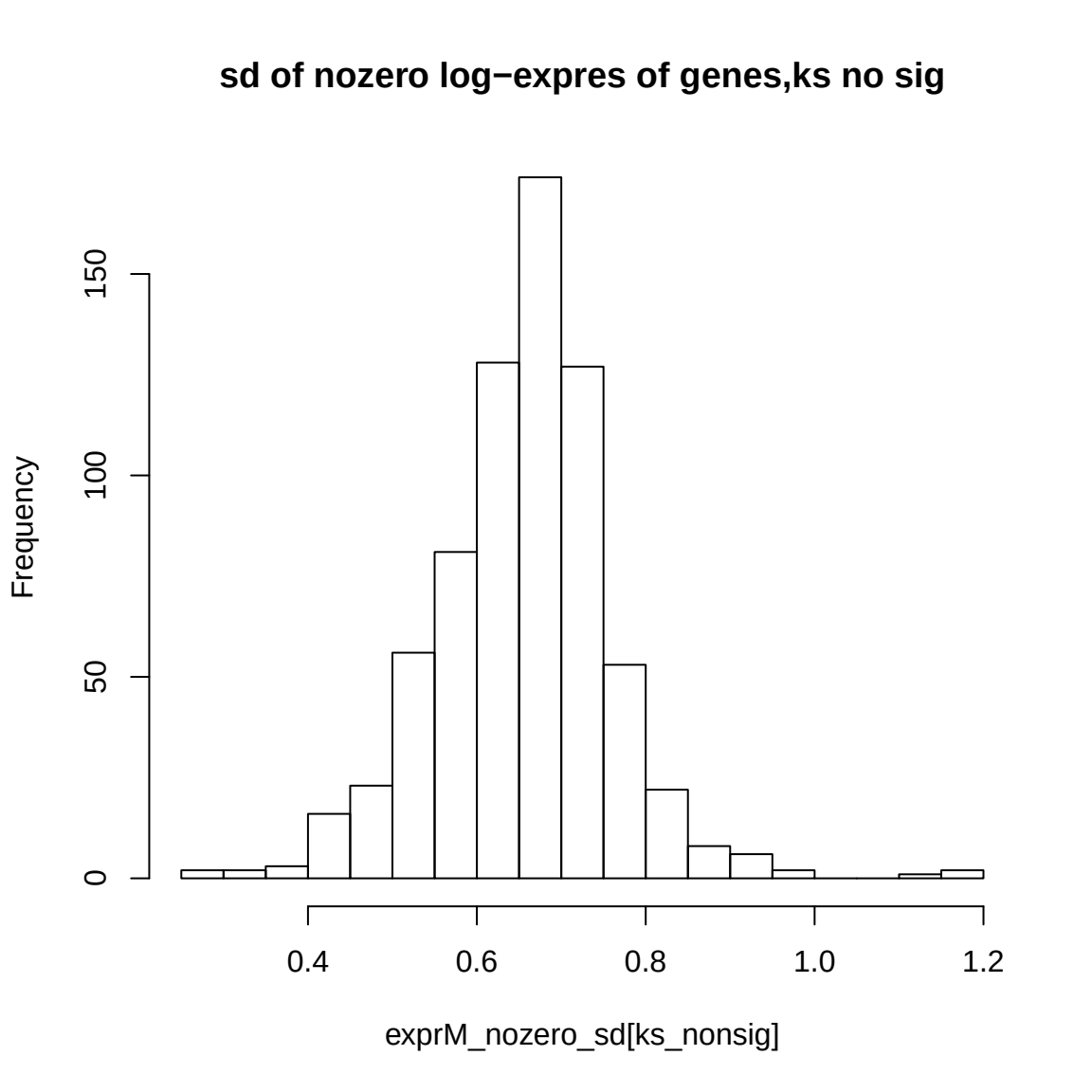

mean of nozero log−expres of genes,ksgreater sig
Frequency
0
50
100
150
200
250
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM_nozero_mean[ksgreater_sig]

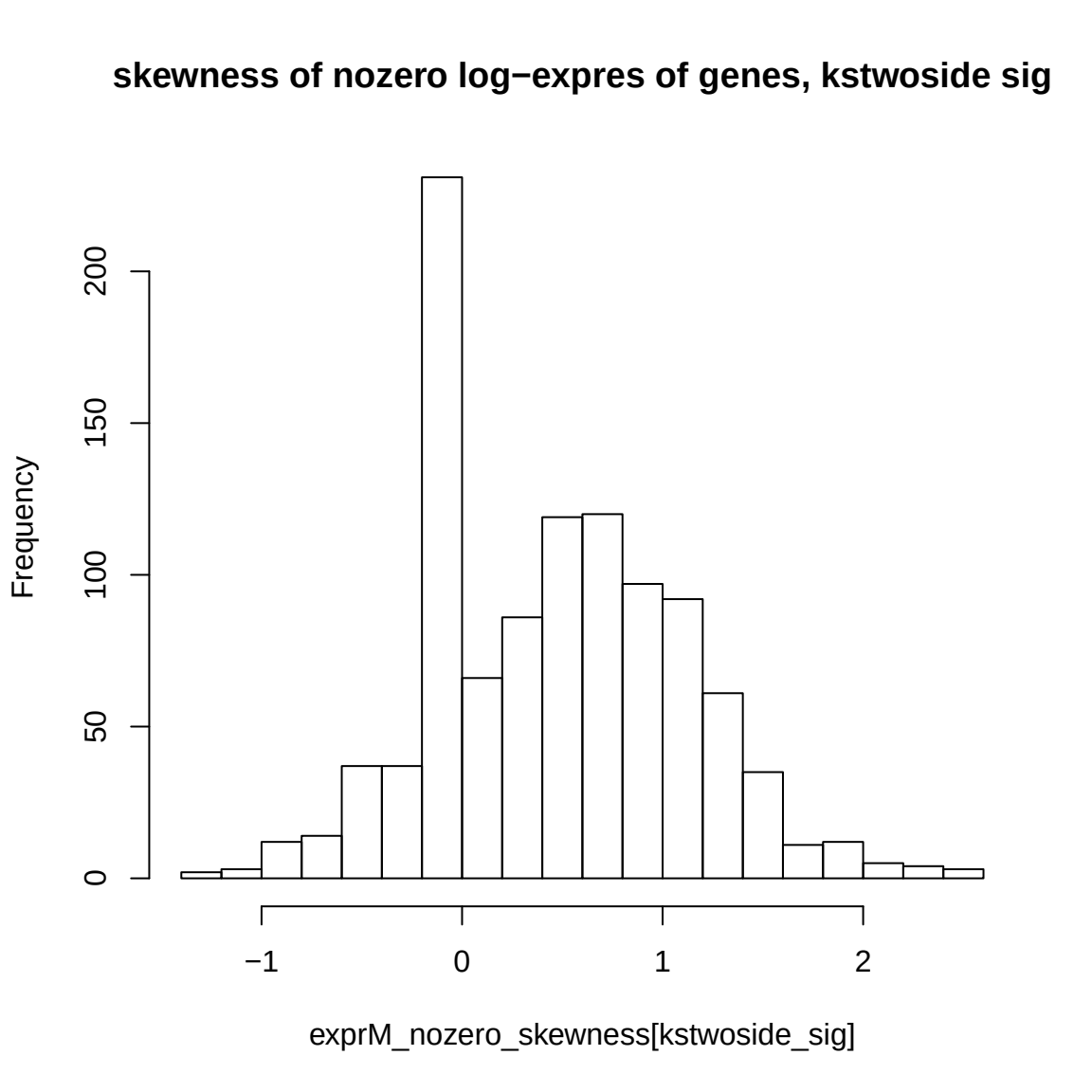

mean of nozero log−expres of genes,ks no sig
Frequency
0
50
100
150
1.0
1.5
2.0
2.5
3.0
3.5
exprM_nozero_mean[ks_nonsig]

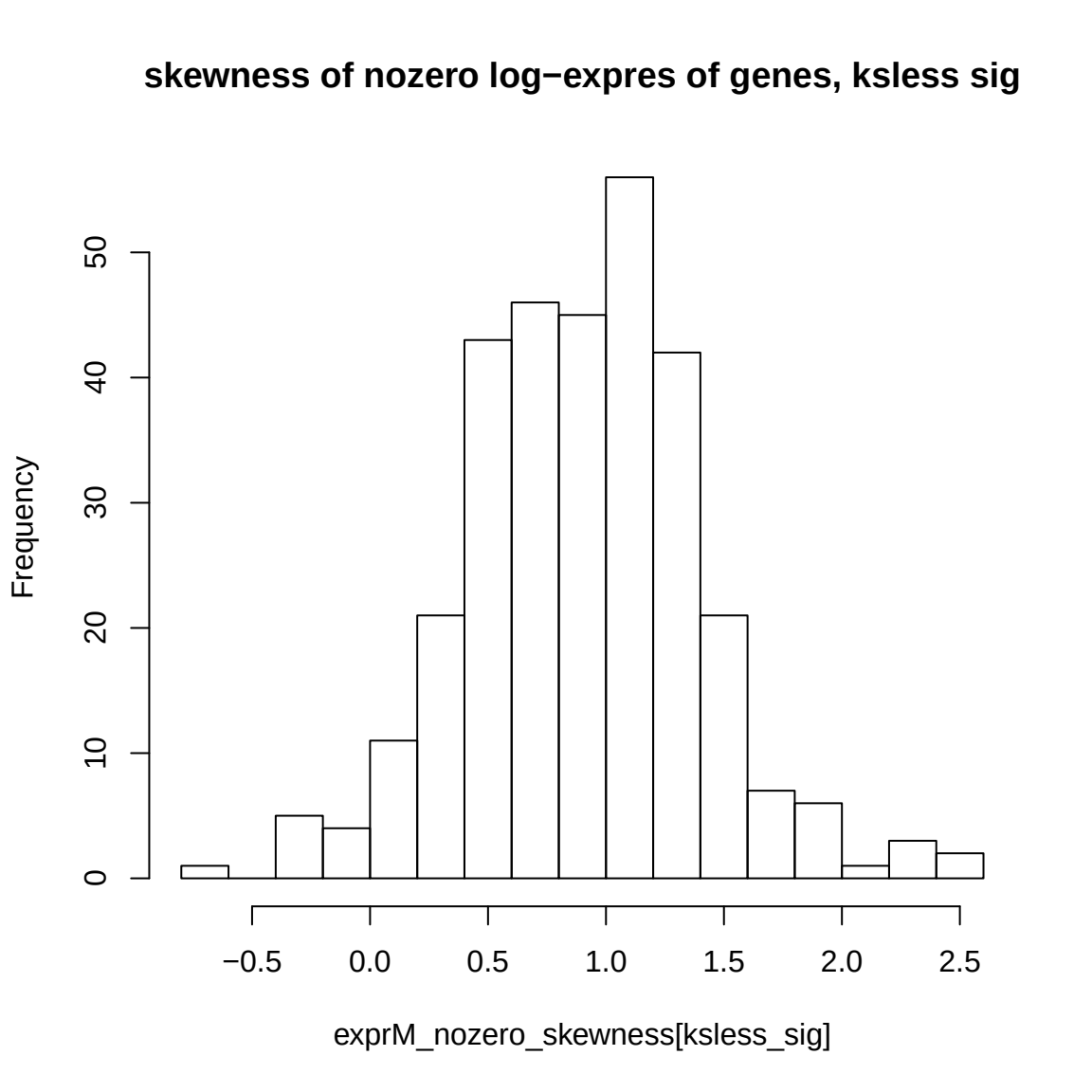

sd of nozero log−expres of genes, kstwoside sig
Frequency
0
50
100
150
0.0
0.5
1.0
1.5
2.0
exprM_nozero_sd[kstwoside_sig]

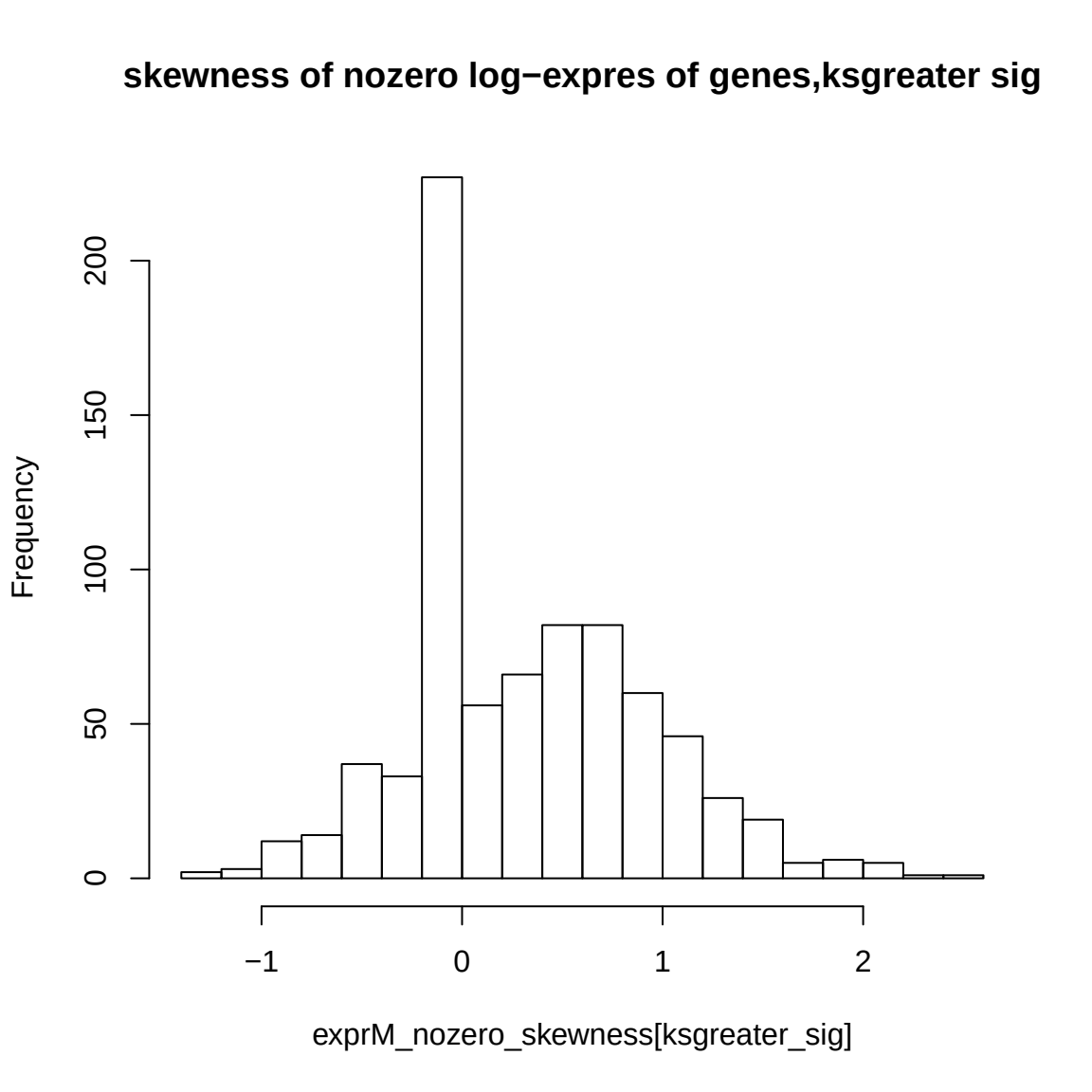

sd of nozero log−expres of genes, ksless sig
Frequency
0
10
20
30
40
50
60
0.4
0.6
0.8
1.0
exprM_nozero_sd[ksless_sig]

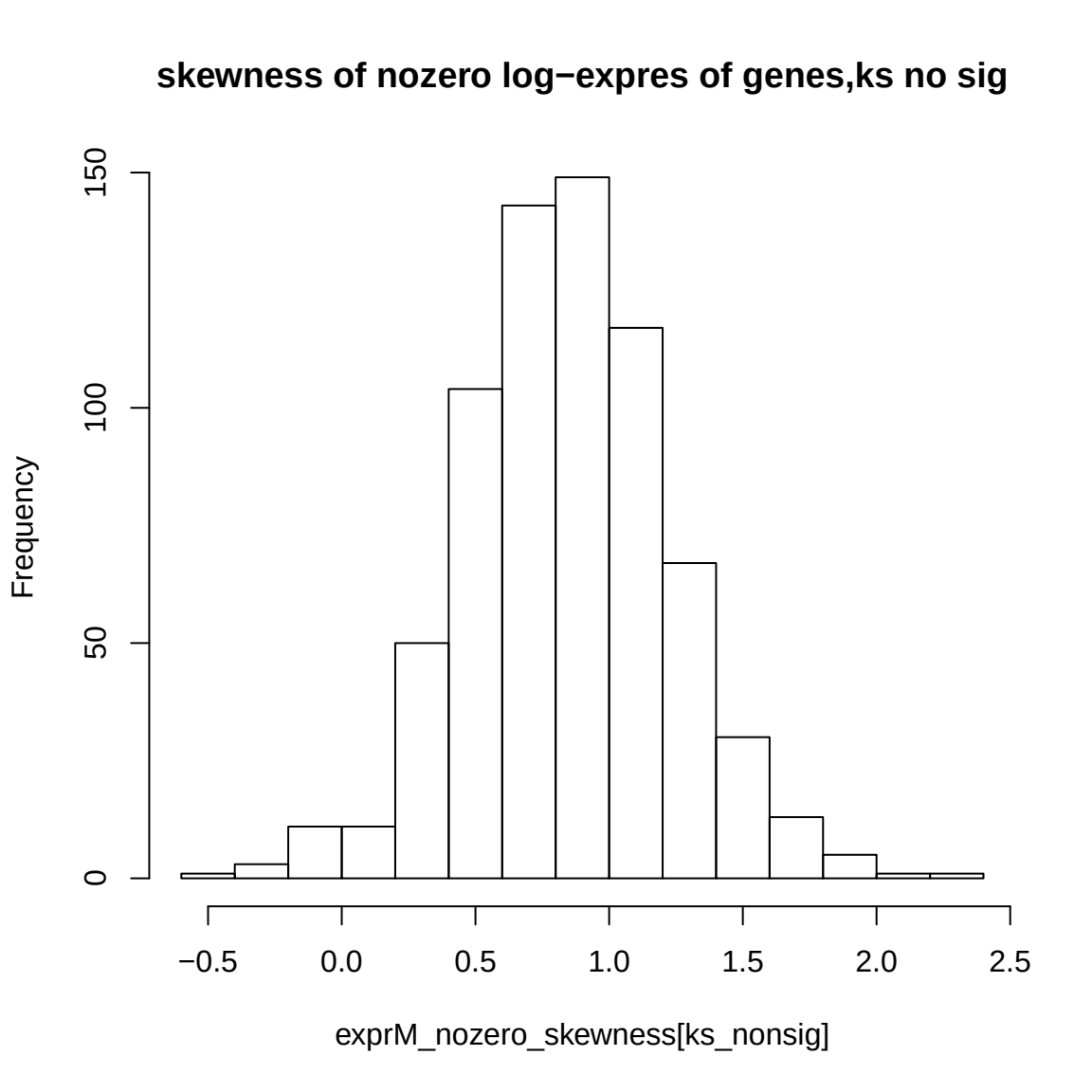

sd of nozero log−expres of genes,ksgreater sig
Frequency
0
20
40
60
80
100
120
0.0
0.5
1.0
1.5
2.0
exprM_nozero_sd[ksgreater_sig]

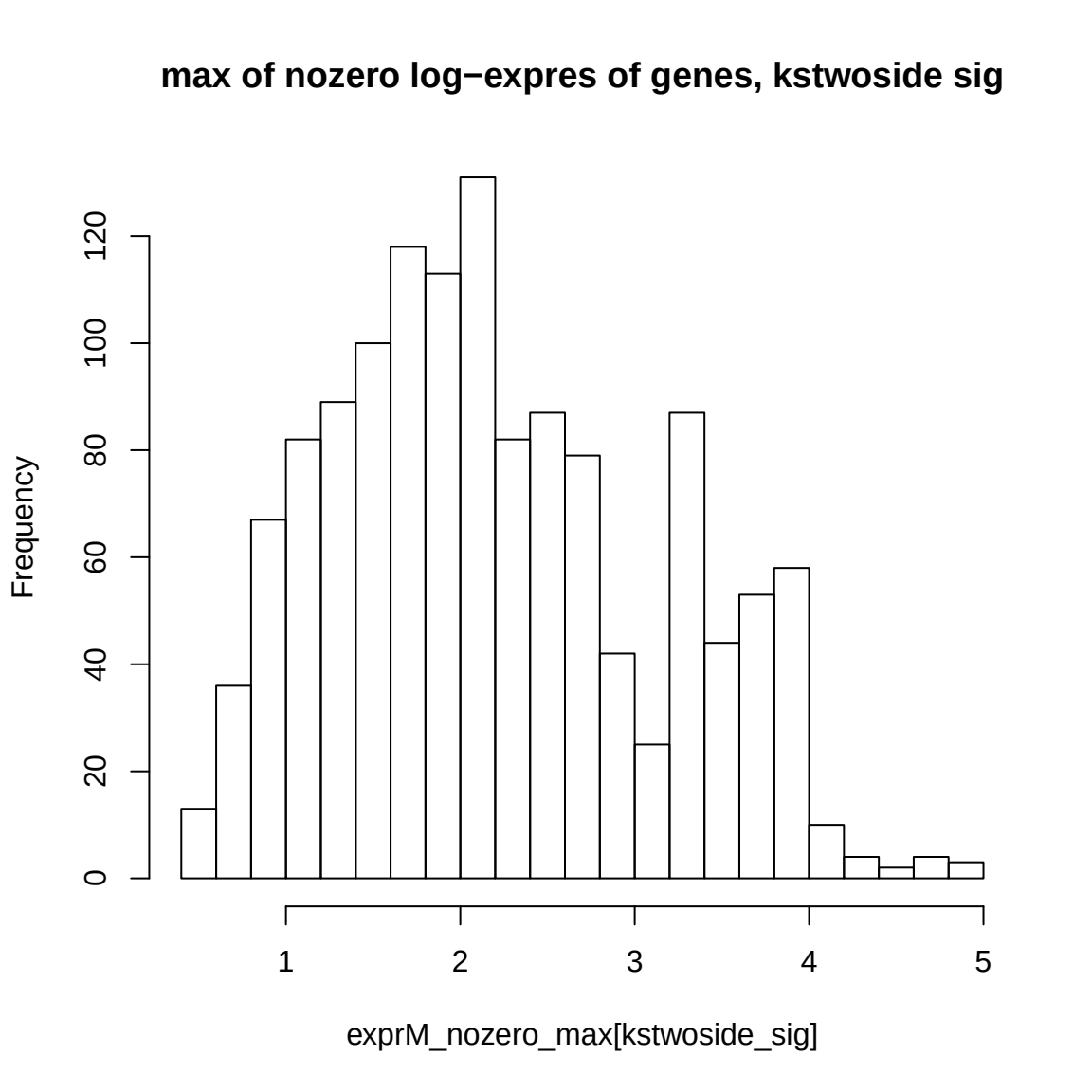

sd of nozero log−expres of genes,ks no sig
Frequency
0
50
100
150
0.4
0.6
0.8
1.0
1.2
exprM_nozero_sd[ks_nonsig]

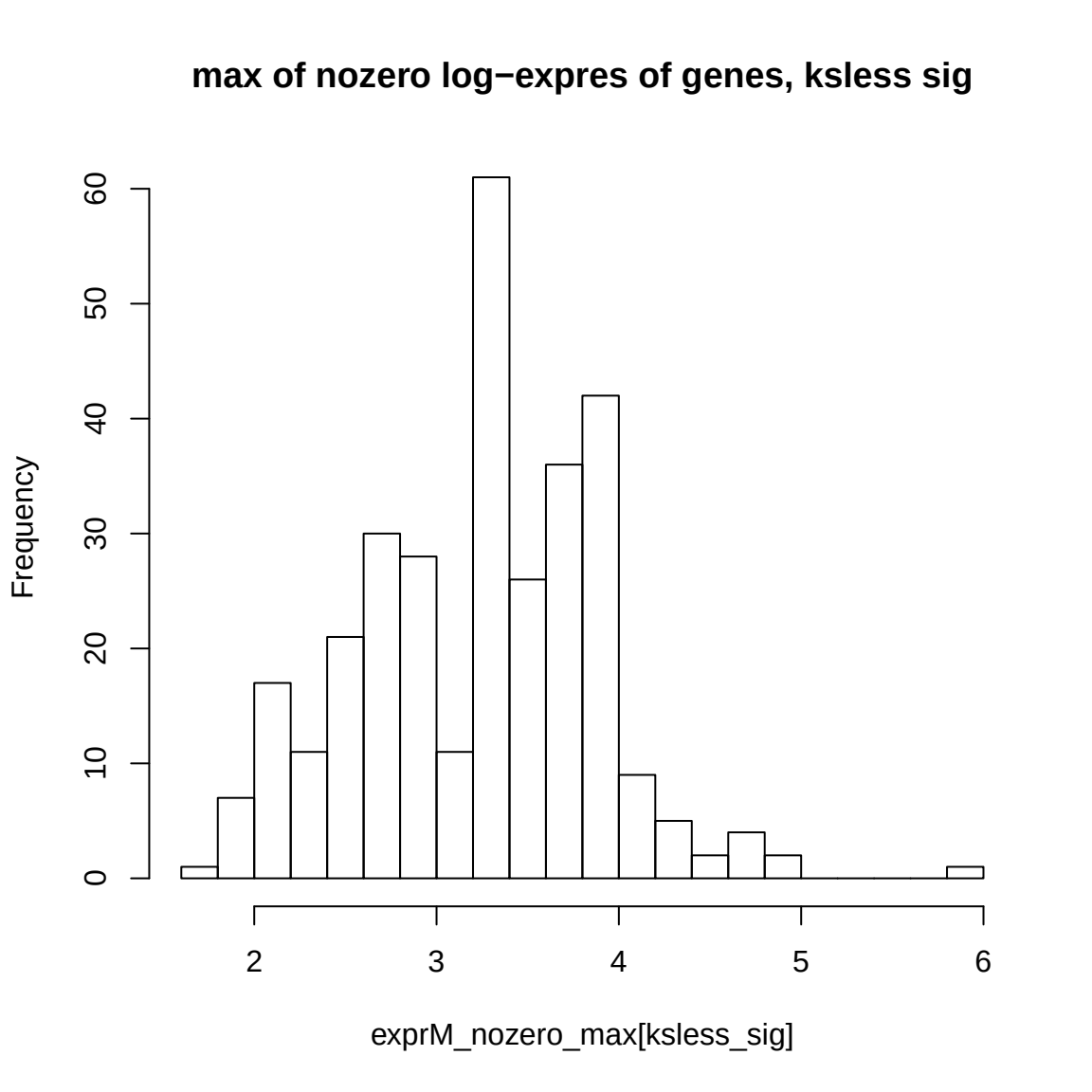

skewness of nozero log−expres of genes, kstwoside sig
Frequency
0
50
100
150
200
−1
0
1
2
exprM_nozero_skewness[kstwoside_sig]

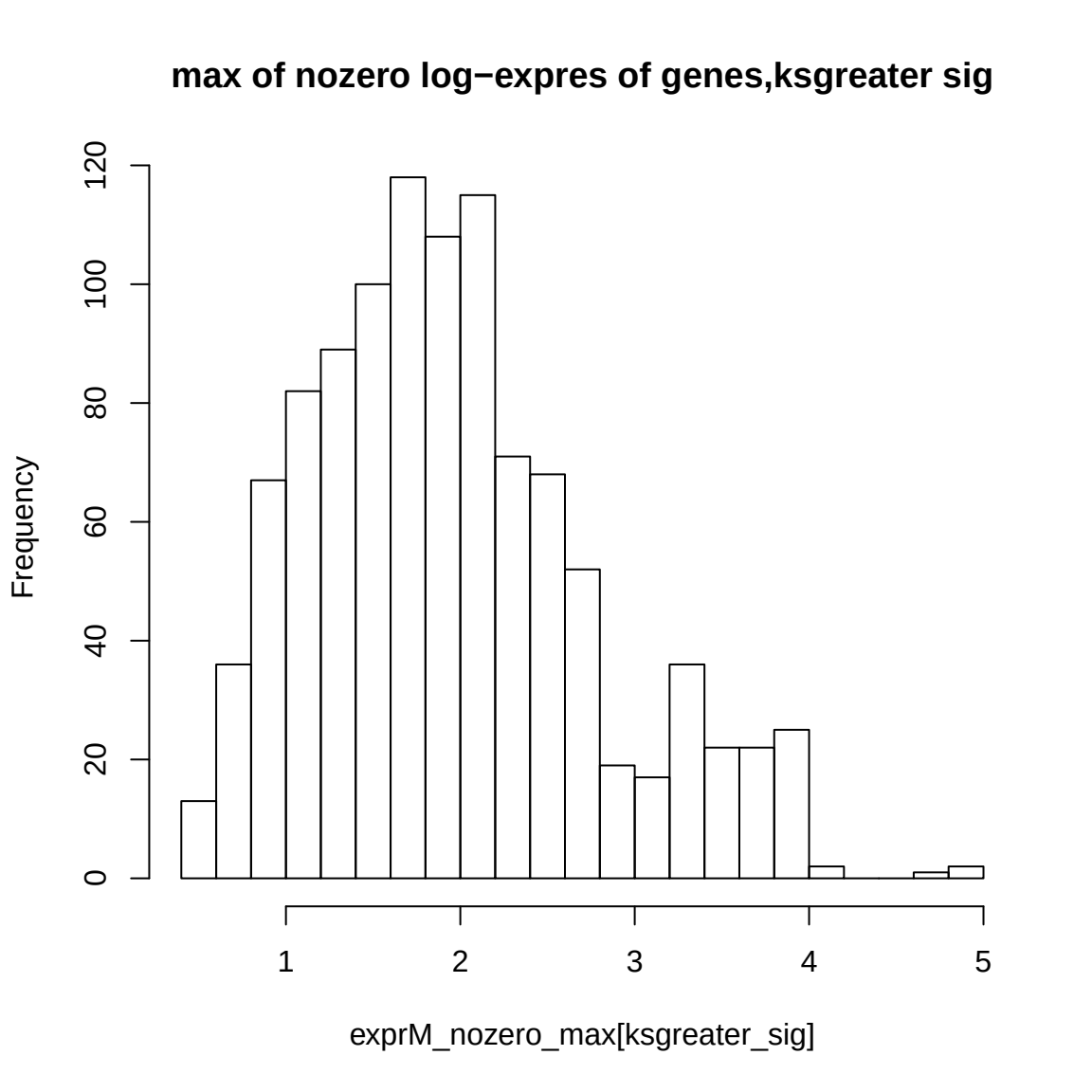

skewness of nozero log−expres of genes, ksless sig
Frequency
0
10
20
30
40
50
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
exprM_nozero_skewness[ksless_sig]

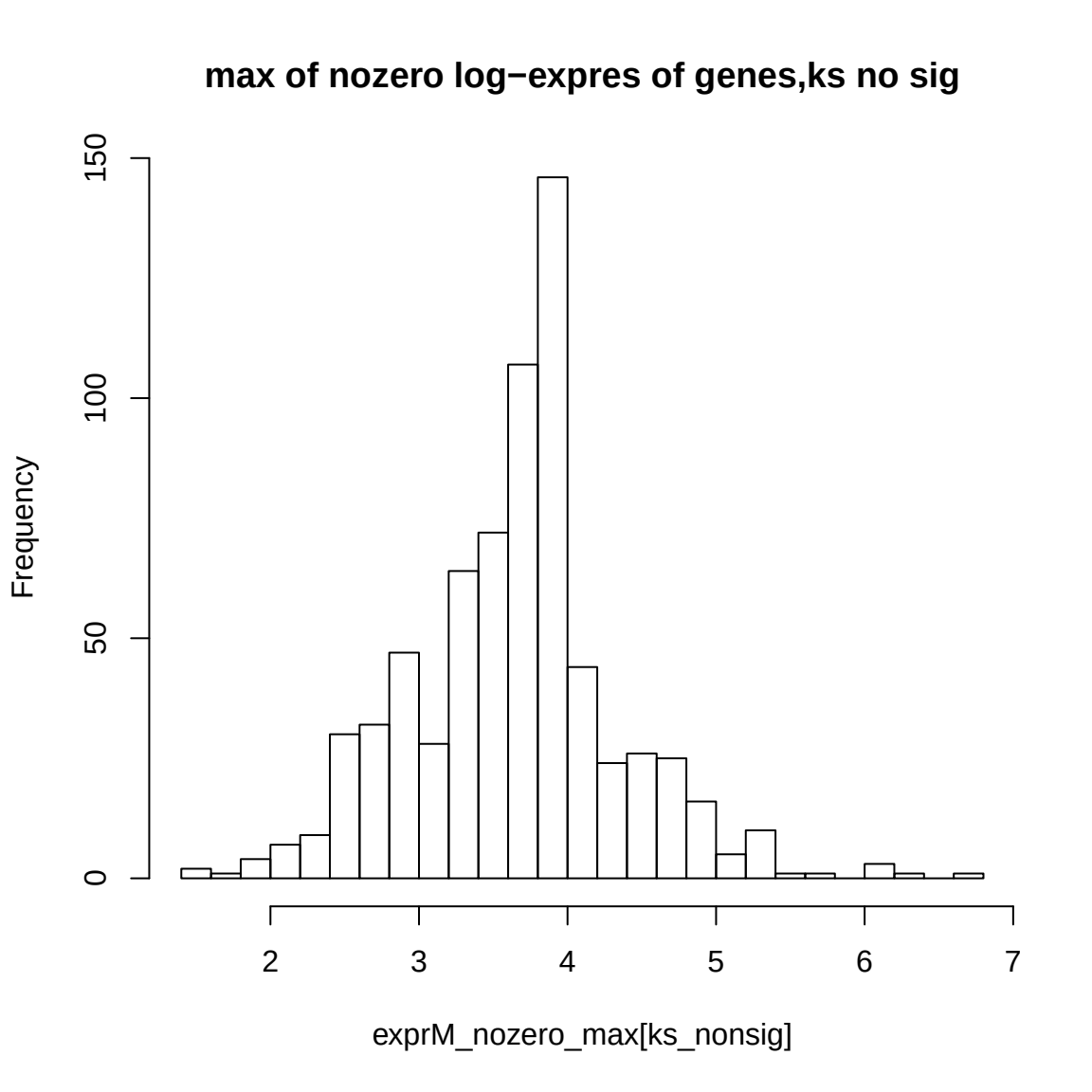

skewness of nozero log−expres of genes,ksgreater sig
Frequency
0
50
100
150
200
−1
0
1
2
exprM_nozero_skewness[ksgreater_sig]

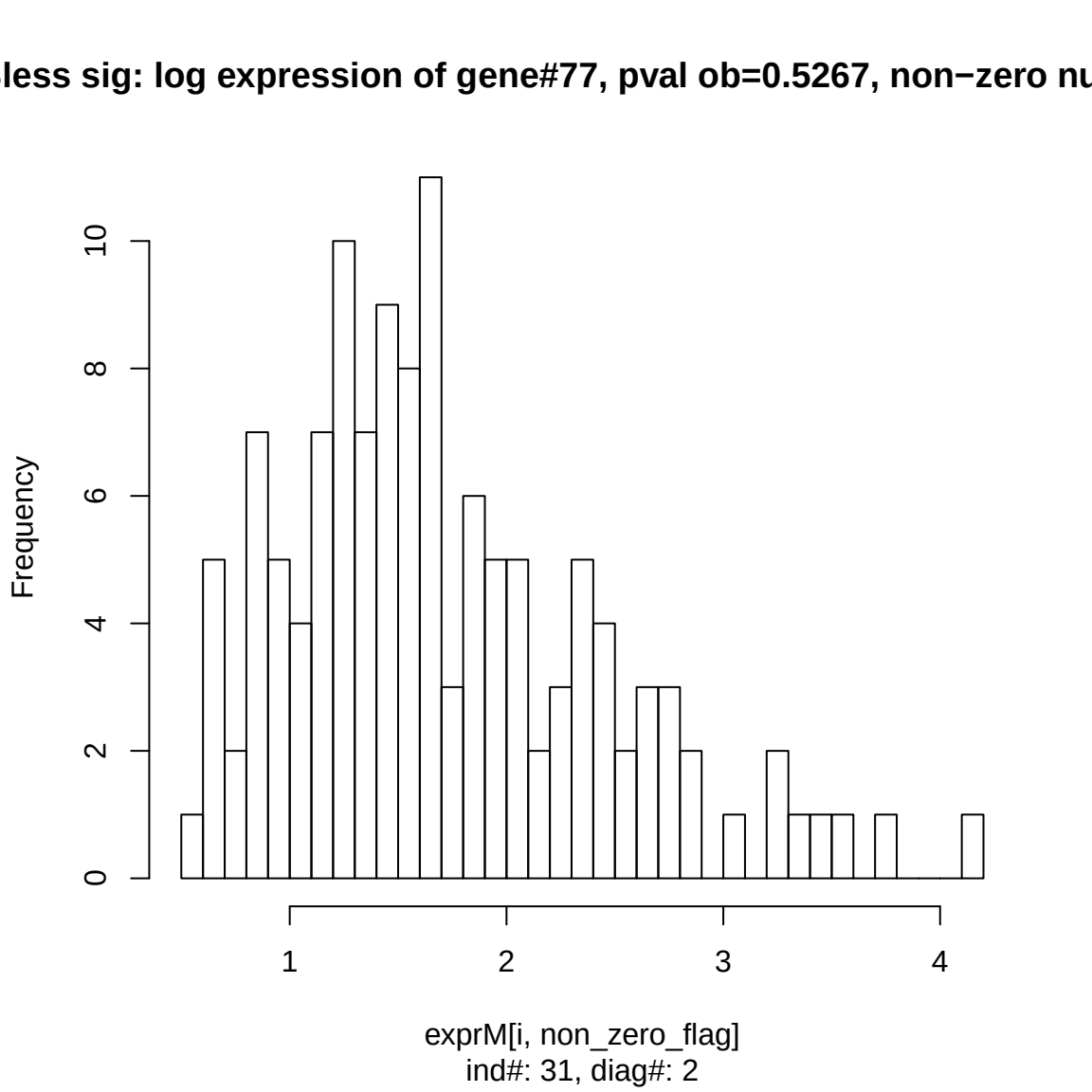

skewness of nozero log−expres of genes,ks no sig
Frequency
0
50
100
150
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
exprM_nozero_skewness[ks_nonsig]

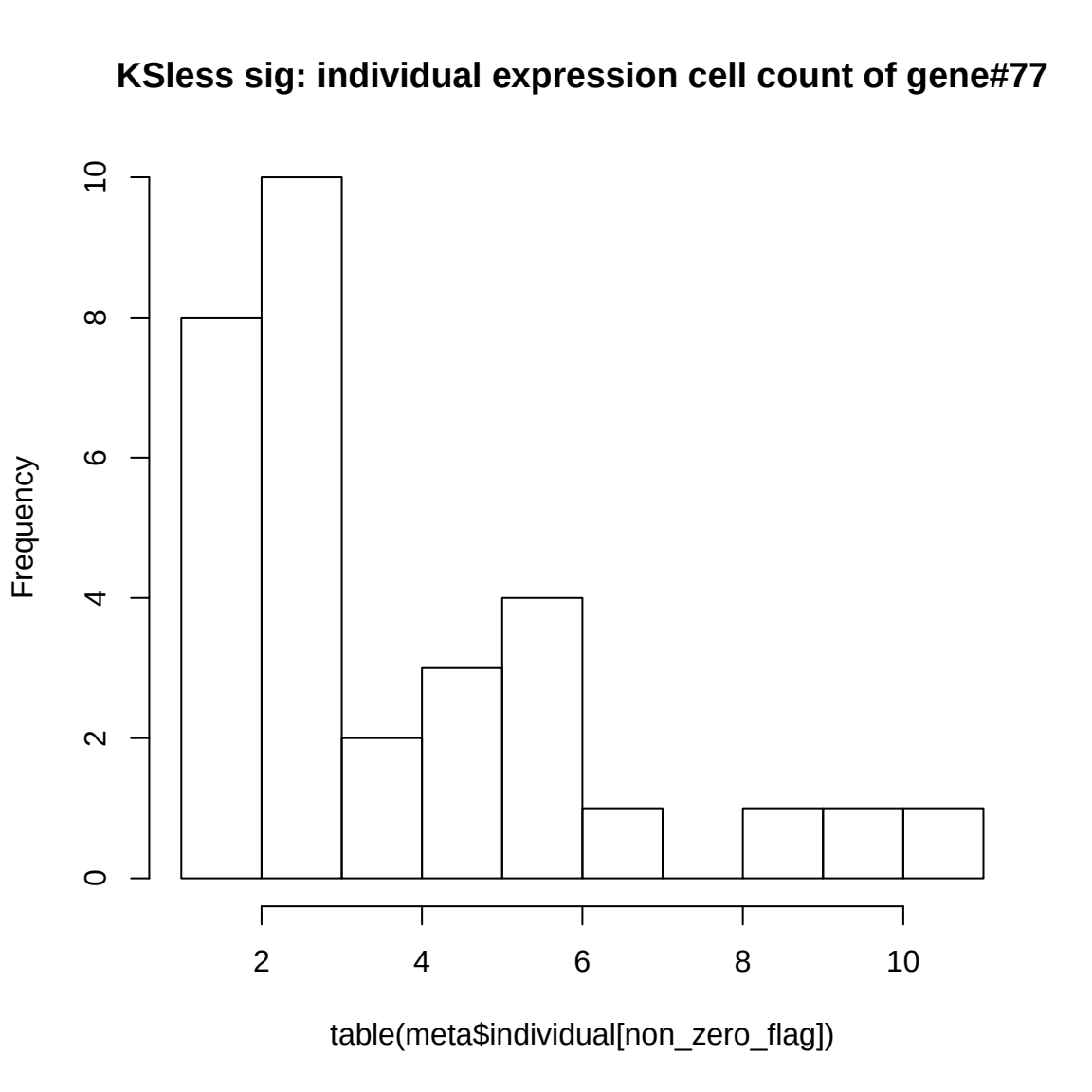

max of nozero log−expres of genes, kstwoside sig
Frequency
0
20
40
60
80
100
120
1
2
3
4
5
exprM_nozero_max[kstwoside_sig]

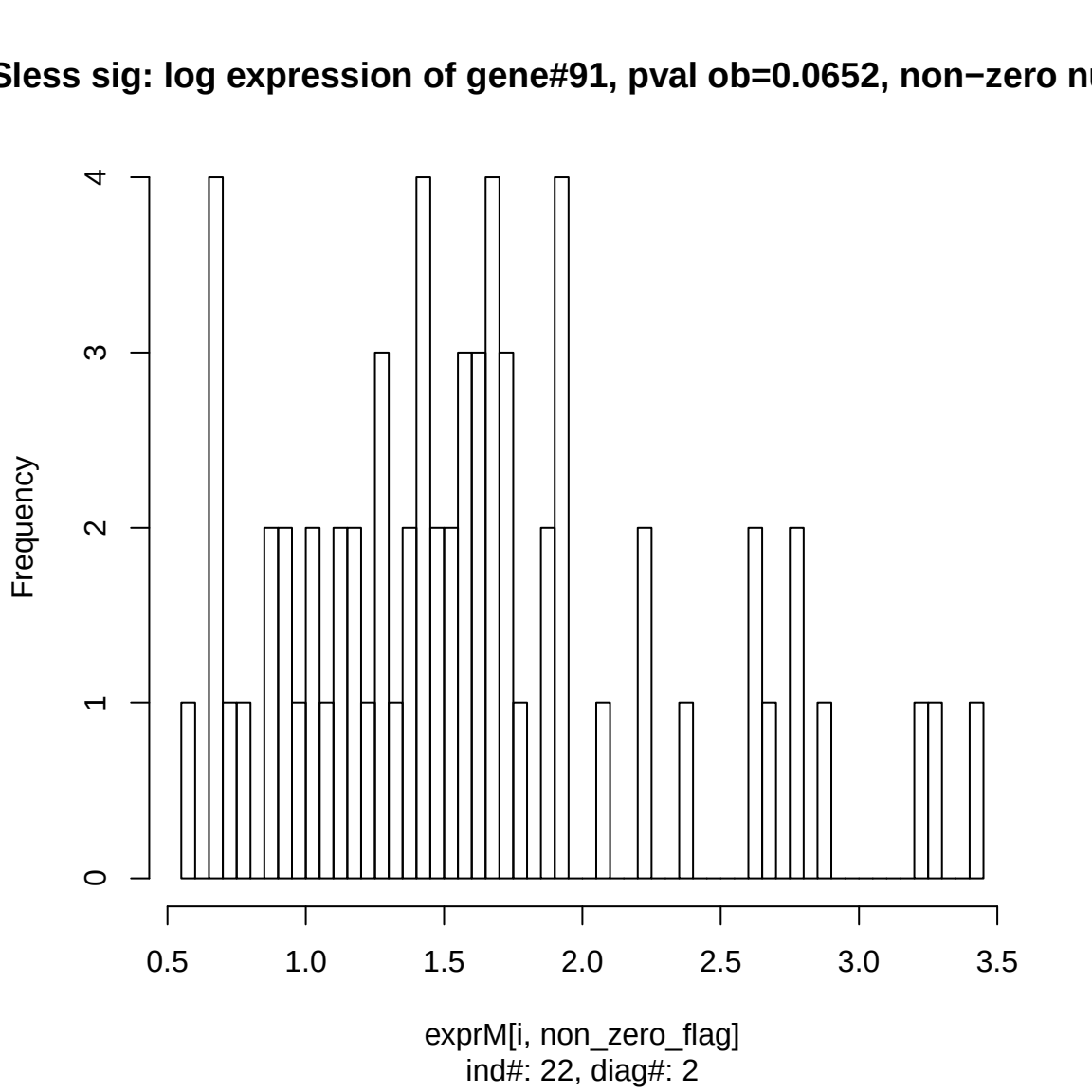

max of nozero log−expres of genes, ksless sig
Frequency
0
10
20
30
40
50
60
2
3
4
5
6
exprM_nozero_max[ksless_sig]

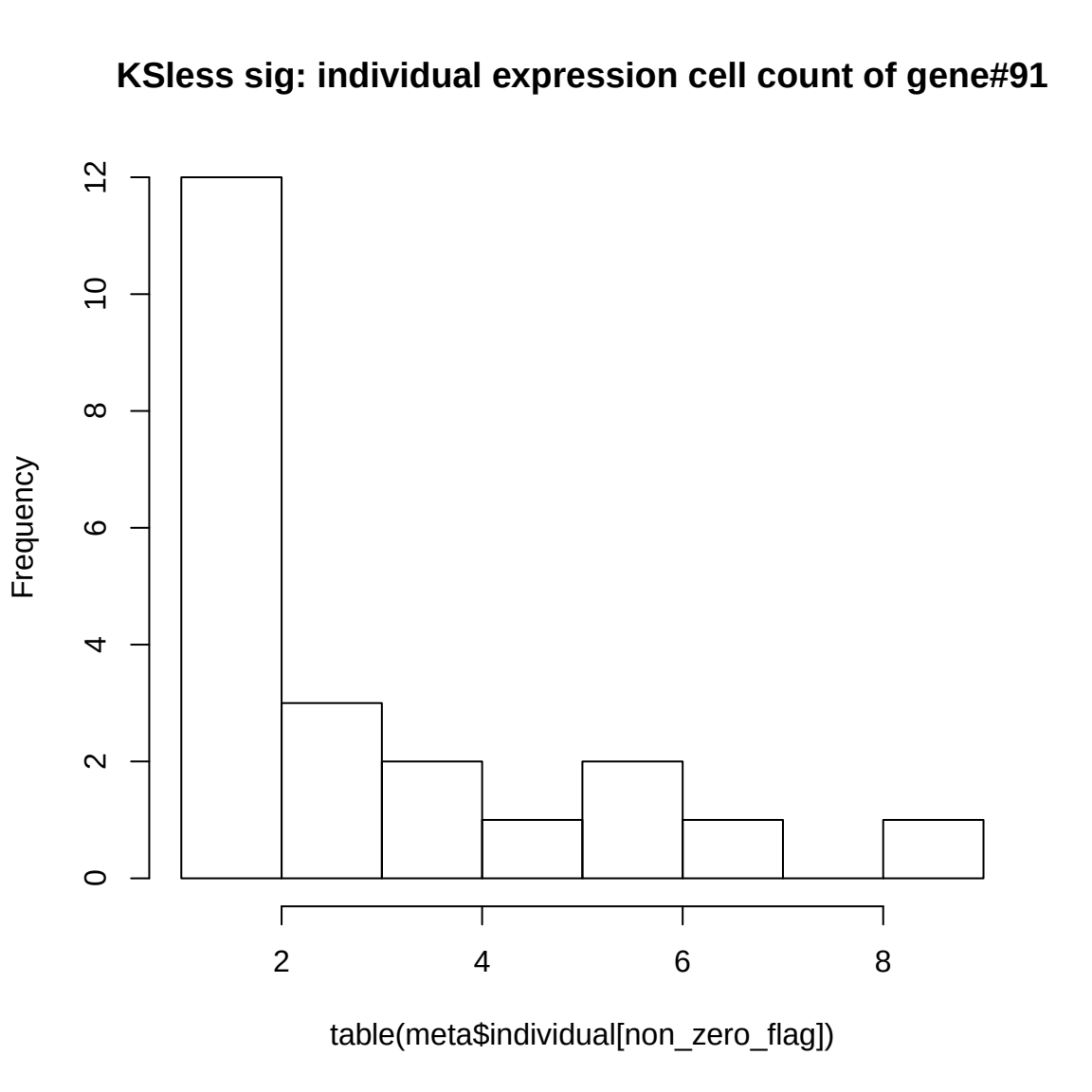

max of nozero log−expres of genes,ksgreater sig
Frequency
0
20
40
60
80
100
120
1
2
3
4
5
exprM_nozero_max[ksgreater_sig]

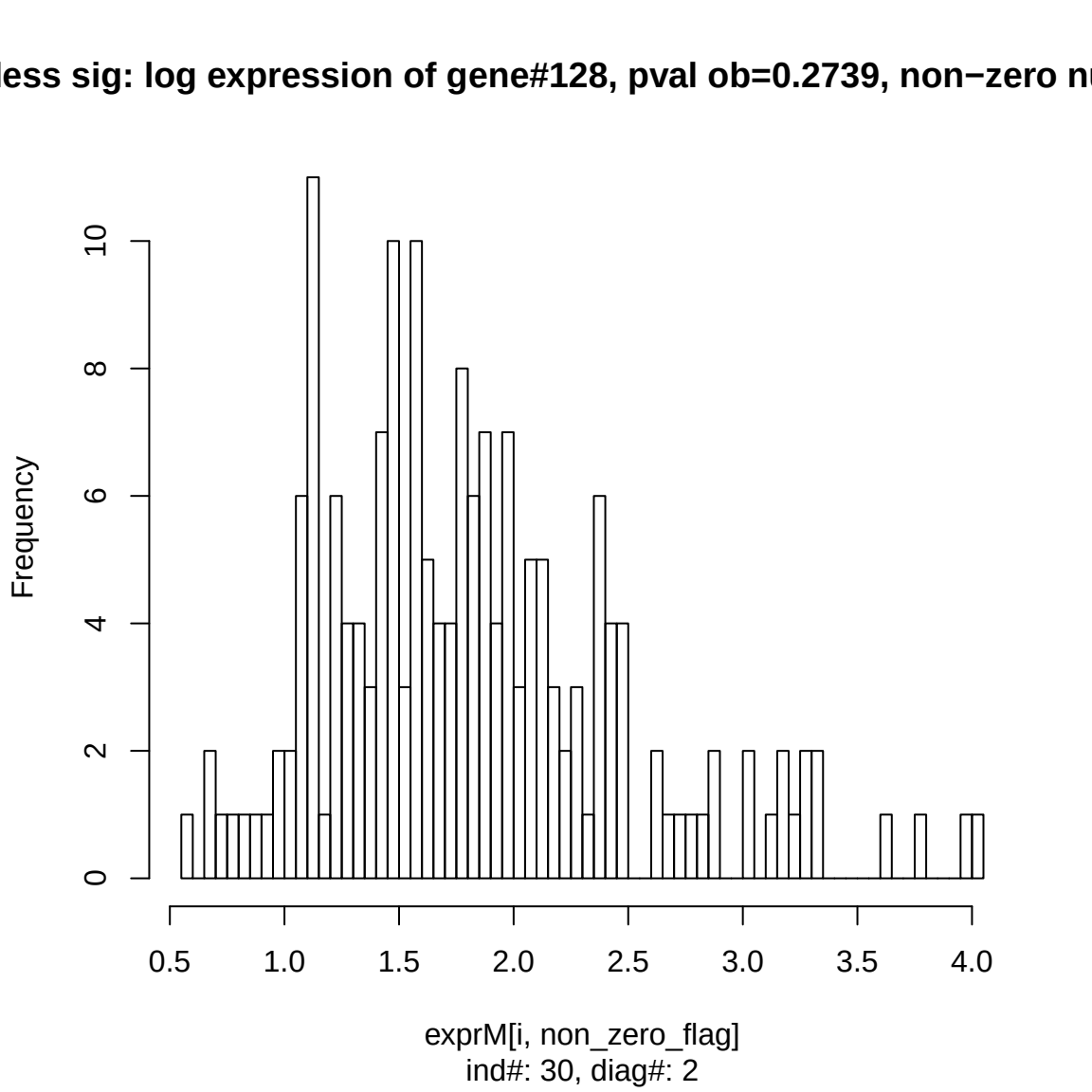

max of nozero log−expres of genes,ks no sig
Frequency
0
50
100
150
2
3
4
5
6
7
exprM_nozero_max[ks_nonsig]

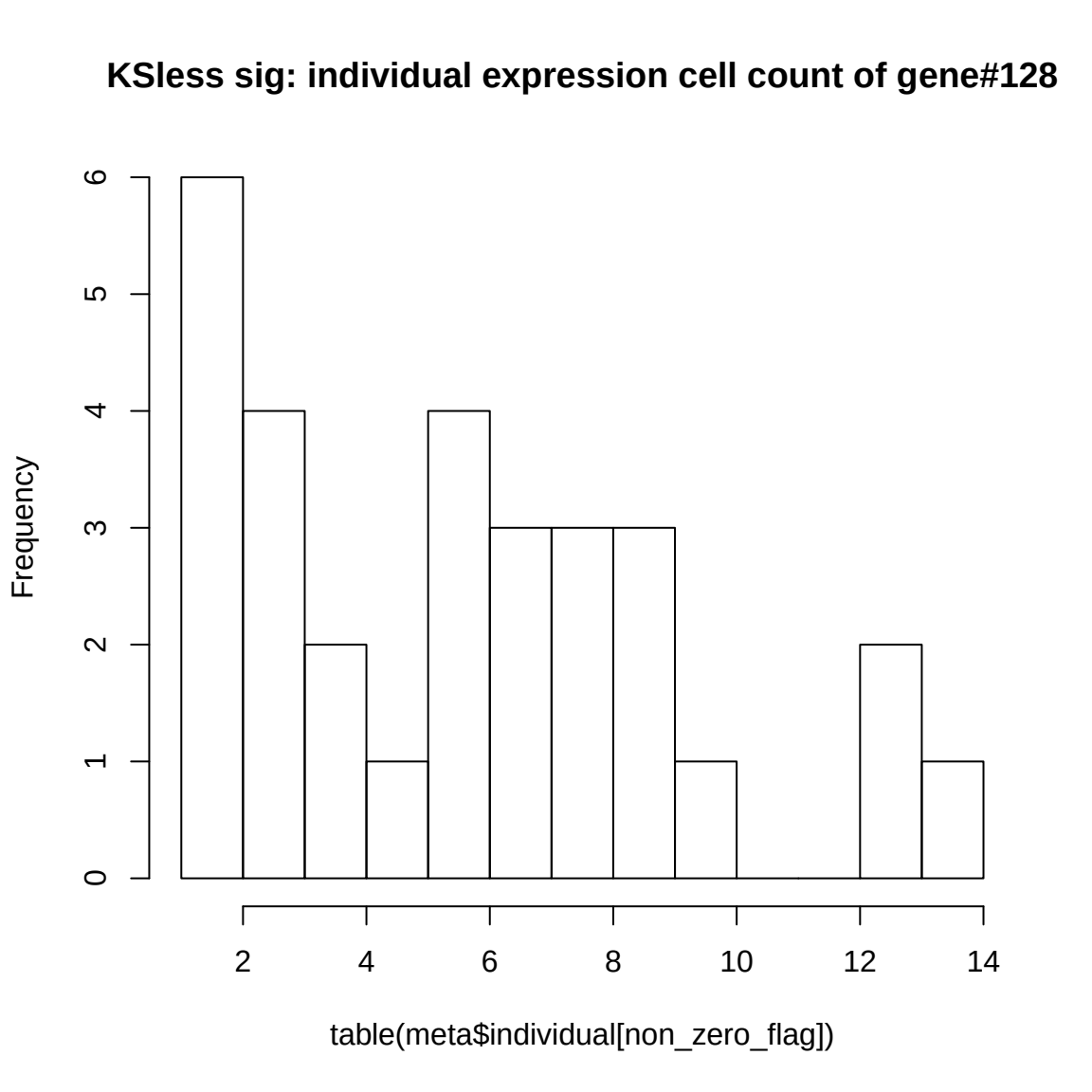

less sig: log expression of gene#77, pval ob=0.5267, non−zero nu
Frequency
0
2
4
6
8
10
1
2
3
4
exprM[i, non_zero_flag]
ind#: 31, diag#: 2

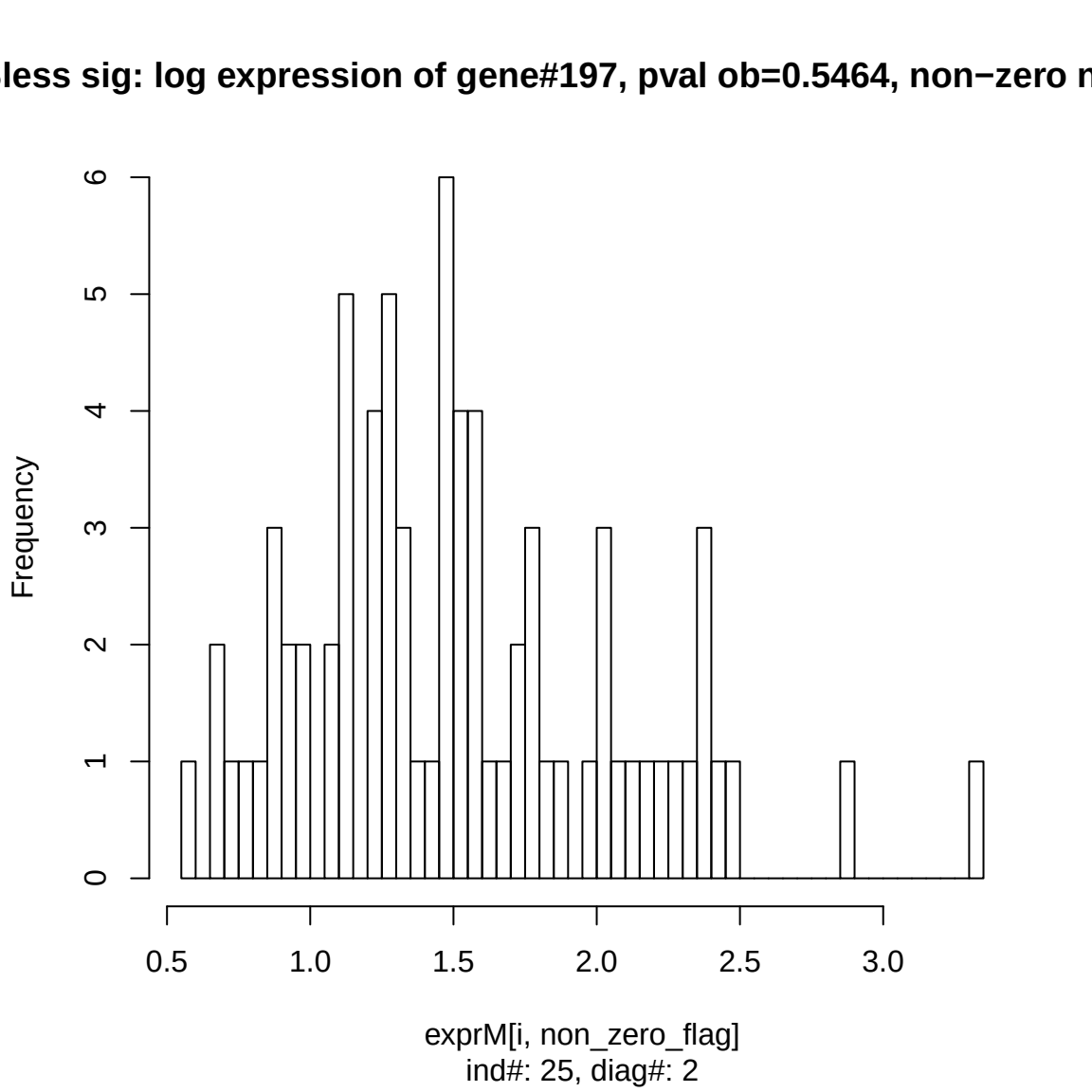

KSless sig: individual expression cell count of gene#77
Frequency
0
2
4
6
8
10
2
4
6
8
10
table(meta$individual[non_zero_flag])

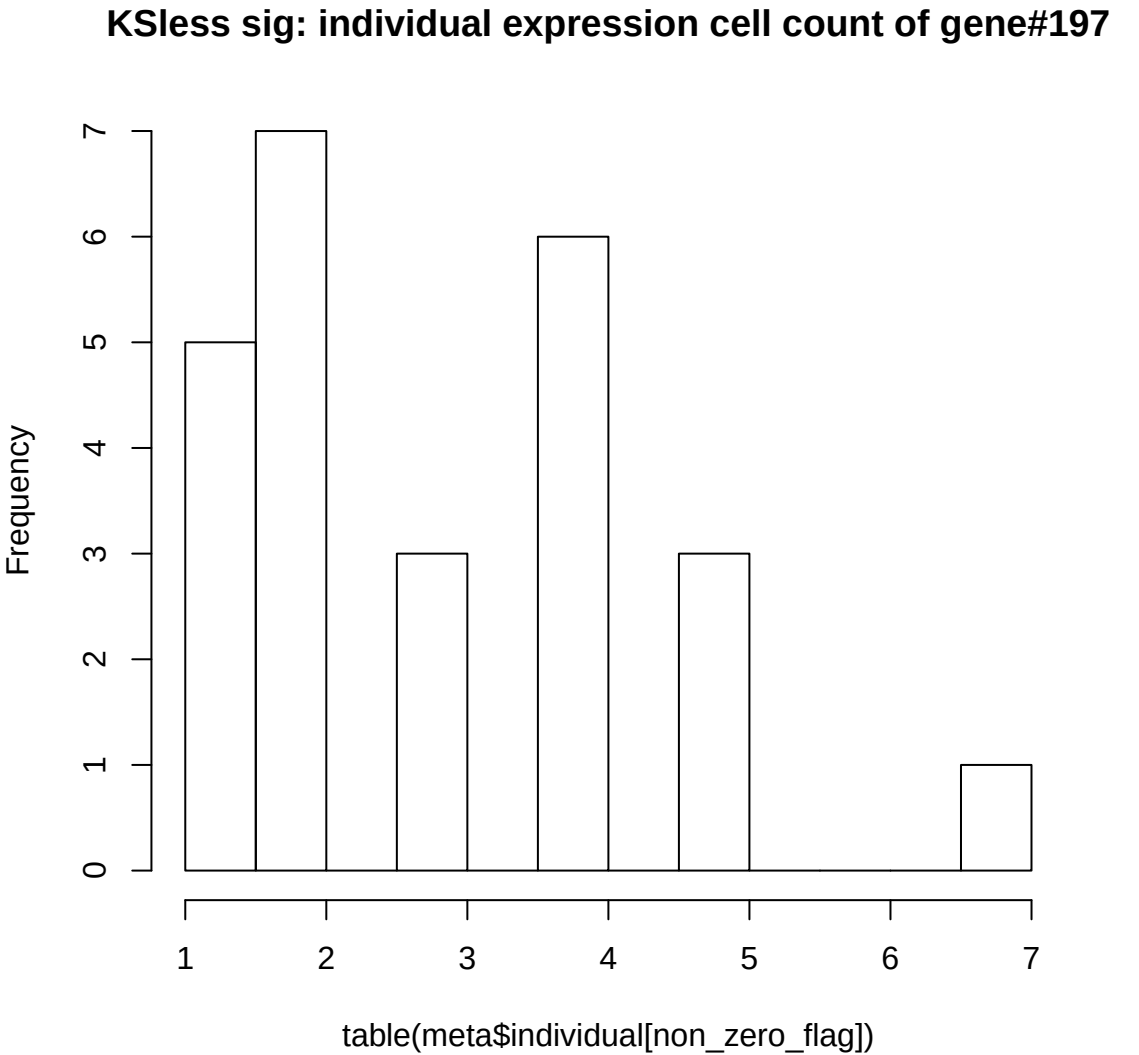

Sless sig: log expression of gene#91, pval ob=0.0652, non−zero nu
Frequency
0
1
2
3
4
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 22, diag#: 2

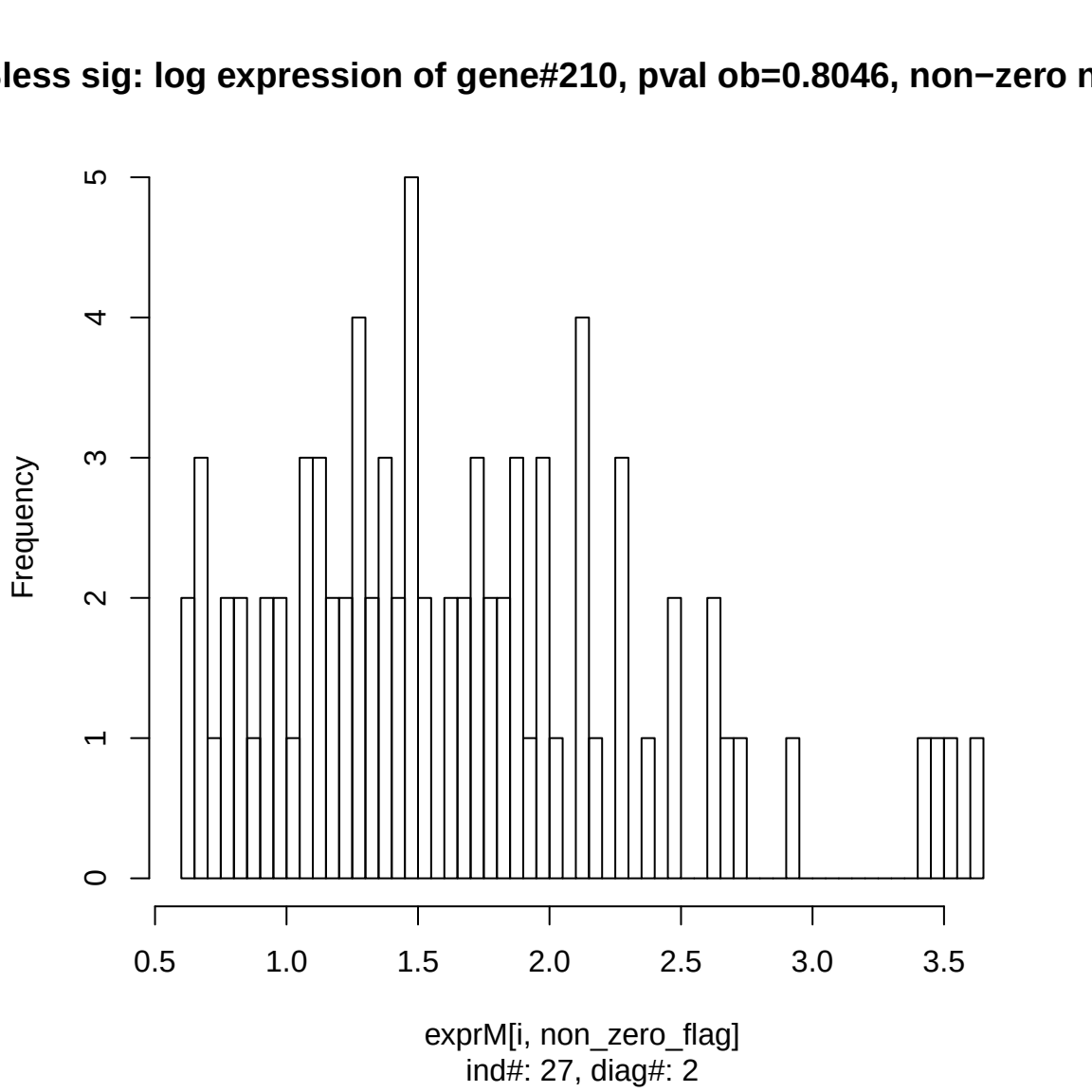

KSless sig: individual expression cell count of gene#91
Frequency
0
2
4
6
8
10
12
2
4
6
8
table(meta$individual[non_zero_flag])

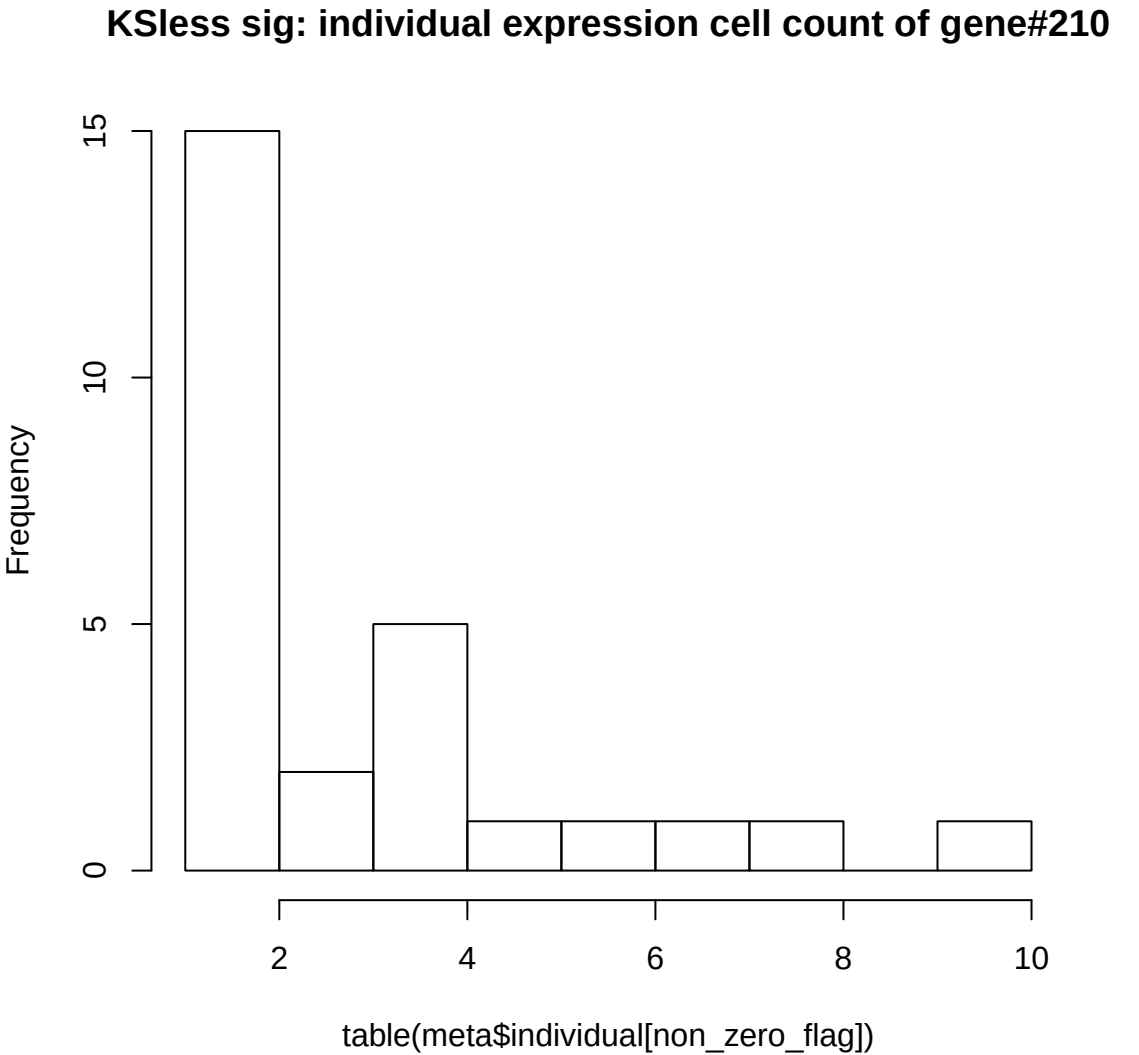

less sig: log expression of gene#128, pval ob=0.2739, non−zero nu
Frequency
0
2
4
6
8
10
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM[i, non_zero_flag]
ind#: 30, diag#: 2

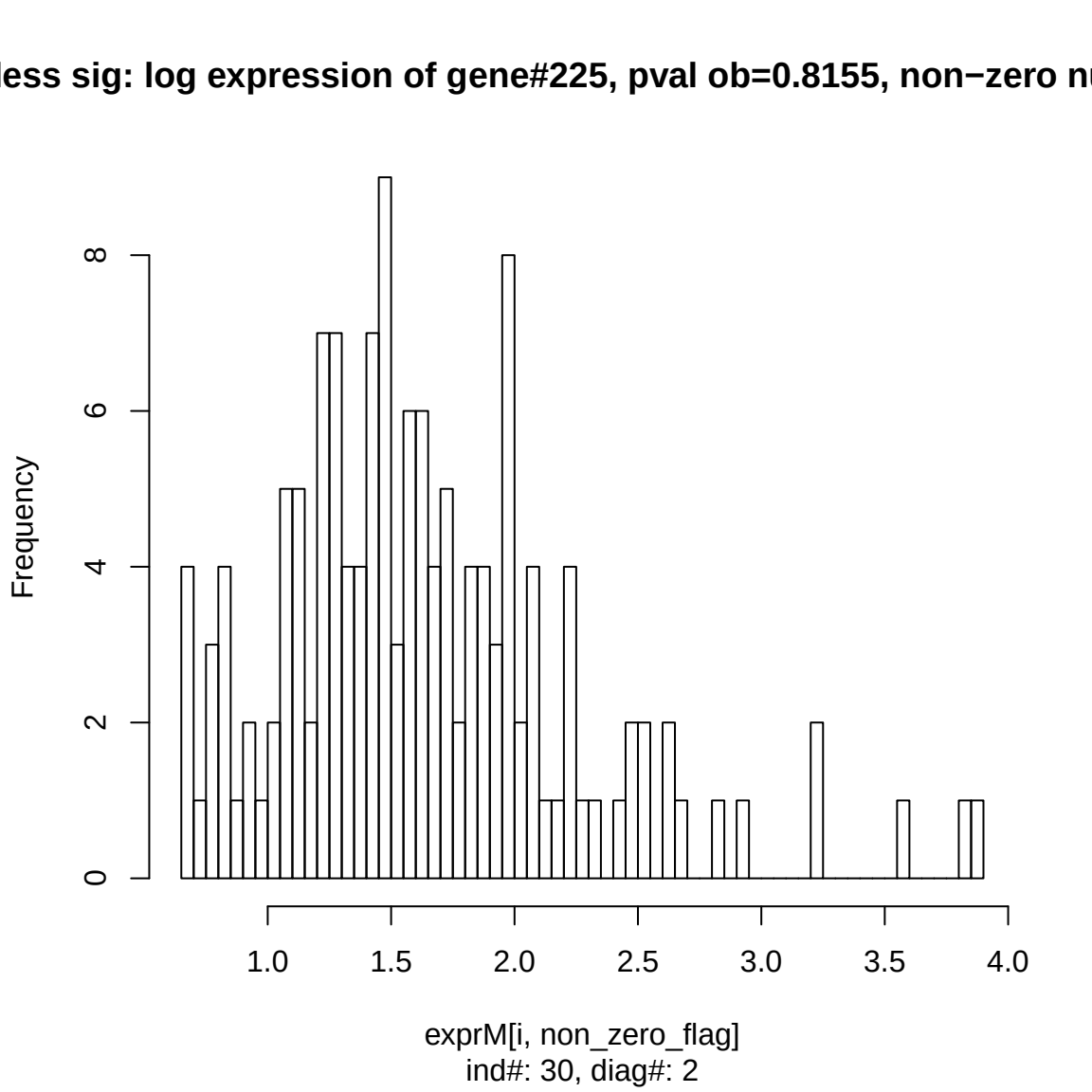

KSless sig: individual expression cell count of gene#128
Frequency
0
1
2
3
4
5
6
2
4
6
8
10
12
14
table(meta$individual[non_zero_flag])

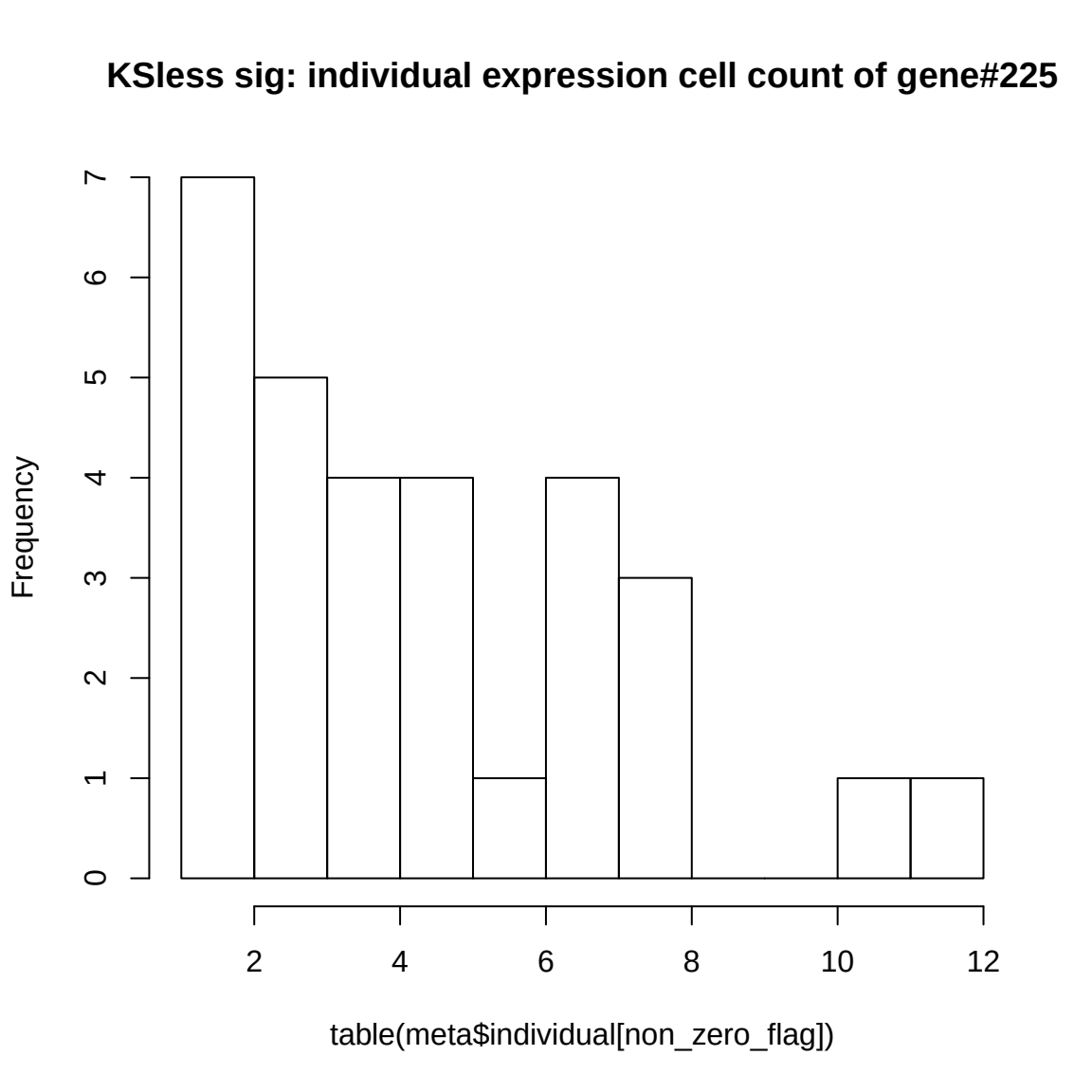

less sig: log expression of gene#197, pval ob=0.5464, non−zero n
Frequency
0
1
2
3
4
5
6
0.5
1.0
1.5
2.0
2.5
3.0
exprM[i, non_zero_flag]
ind#: 25, diag#: 2

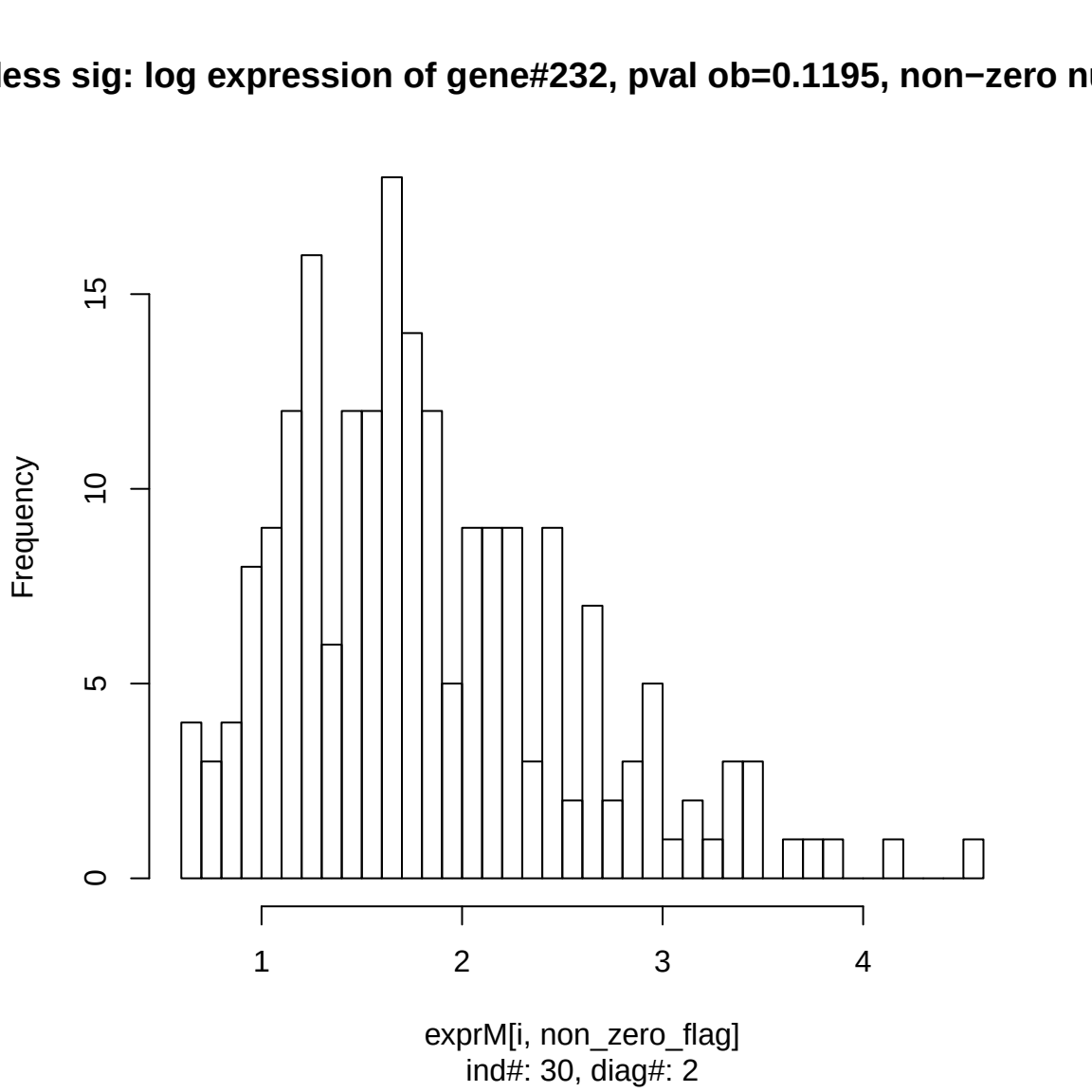

KSless sig: individual expression cell count of gene#197
Frequency
0
1
2
3
4
5
6
7
1
2
3
4
5
6
7
table(meta$individual[non_zero_flag])

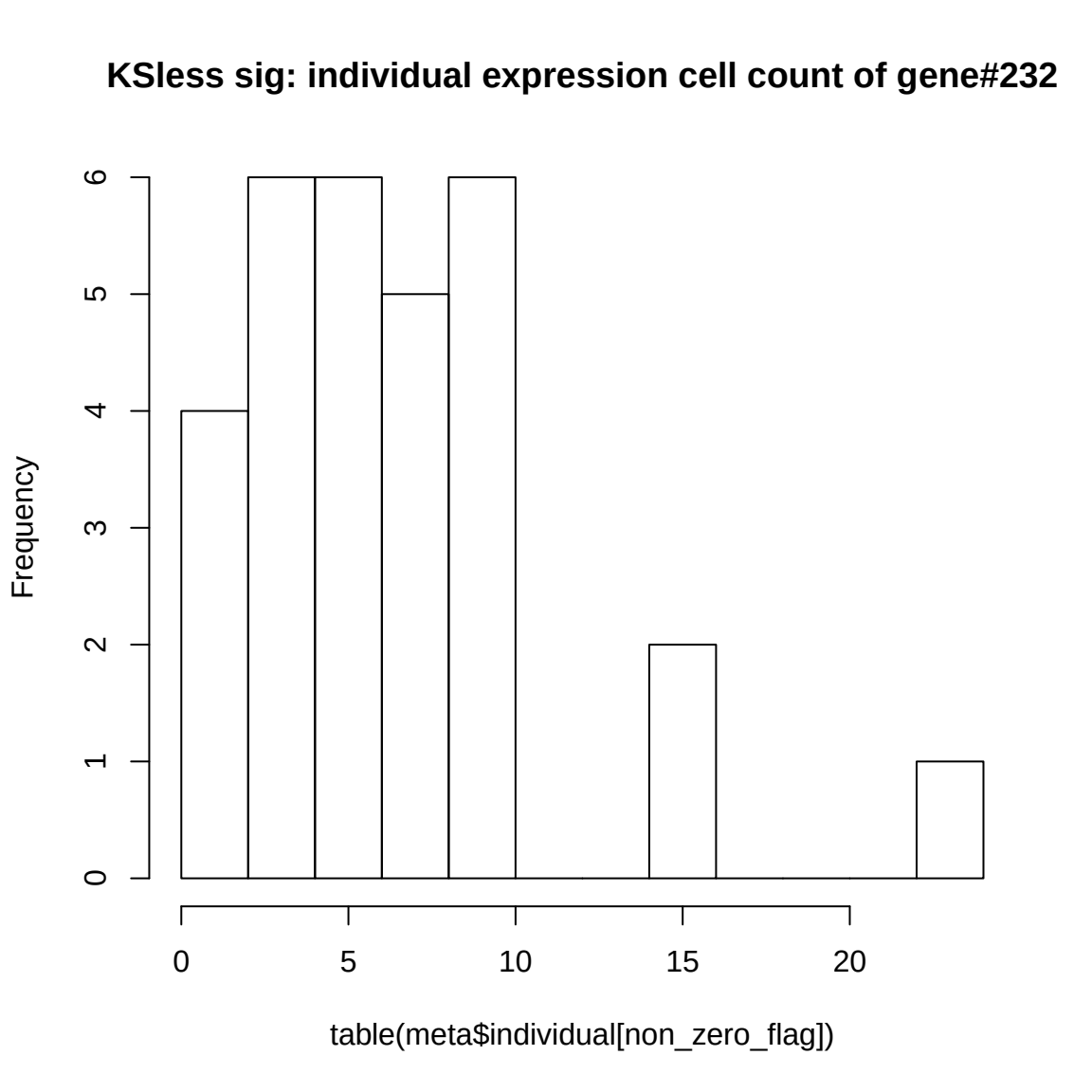

less sig: log expression of gene#210, pval ob=0.8046, non−zero n
Frequency
0
1
2
3
4
5
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 27, diag#: 2

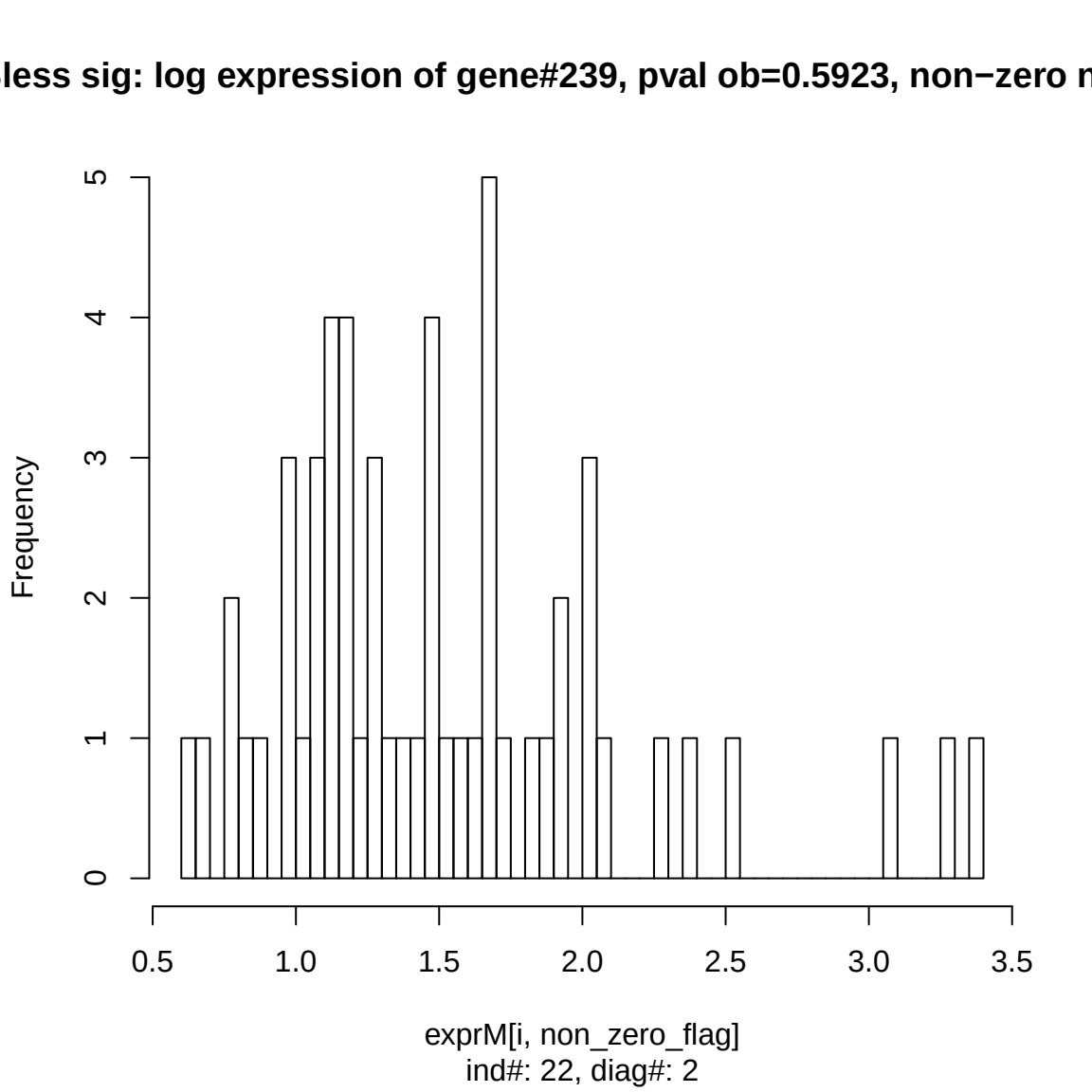

KSless sig: individual expression cell count of gene#210
Frequency
0
5
10
15
2
4
6
8
10
table(meta$individual[non_zero_flag])

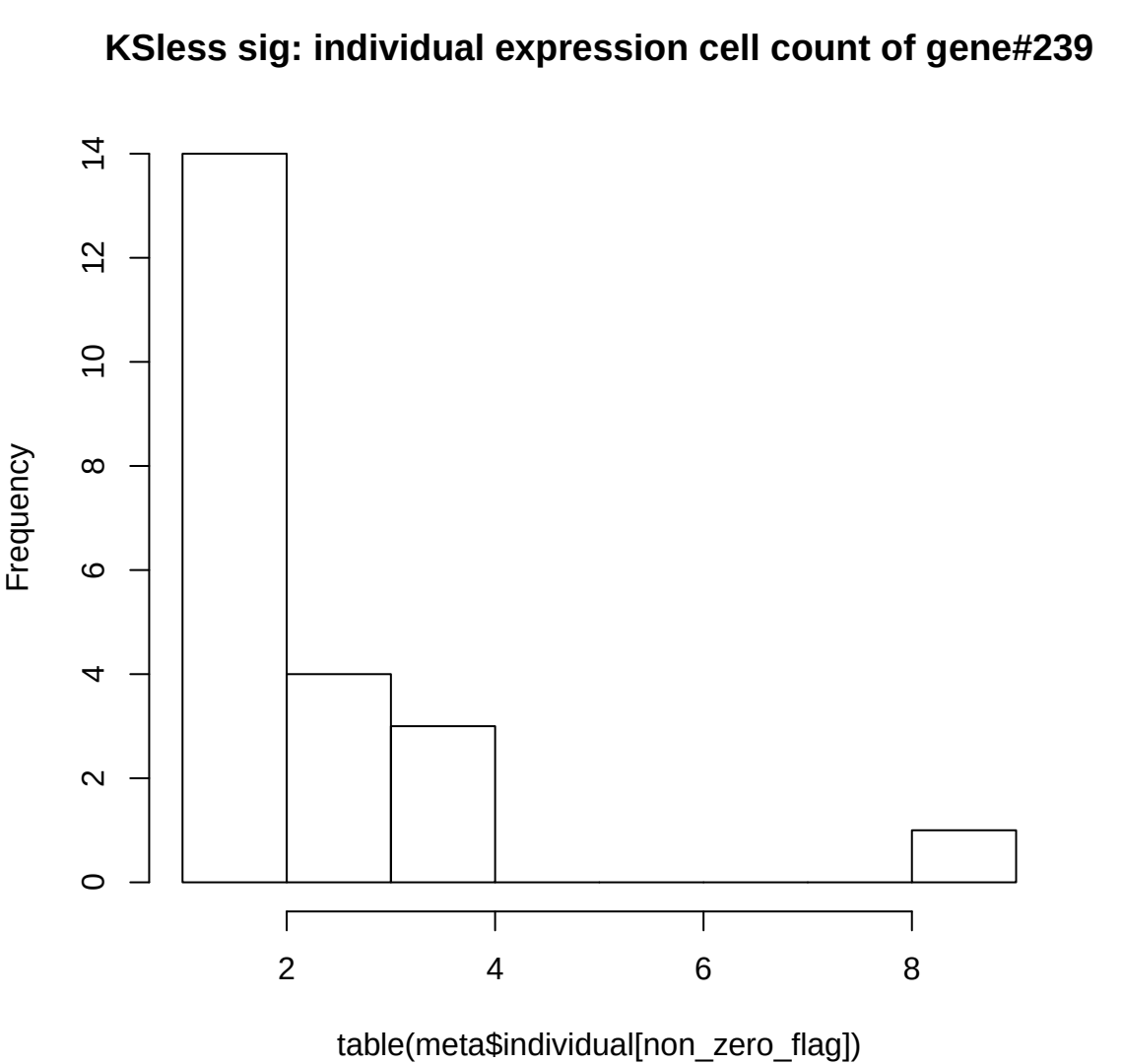

less sig: log expression of gene#225, pval ob=0.8155, non−zero nu
Frequency
0
2
4
6
8
1.0
1.5
2.0
2.5
3.0
3.5
4.0
exprM[i, non_zero_flag]
ind#: 30, diag#: 2

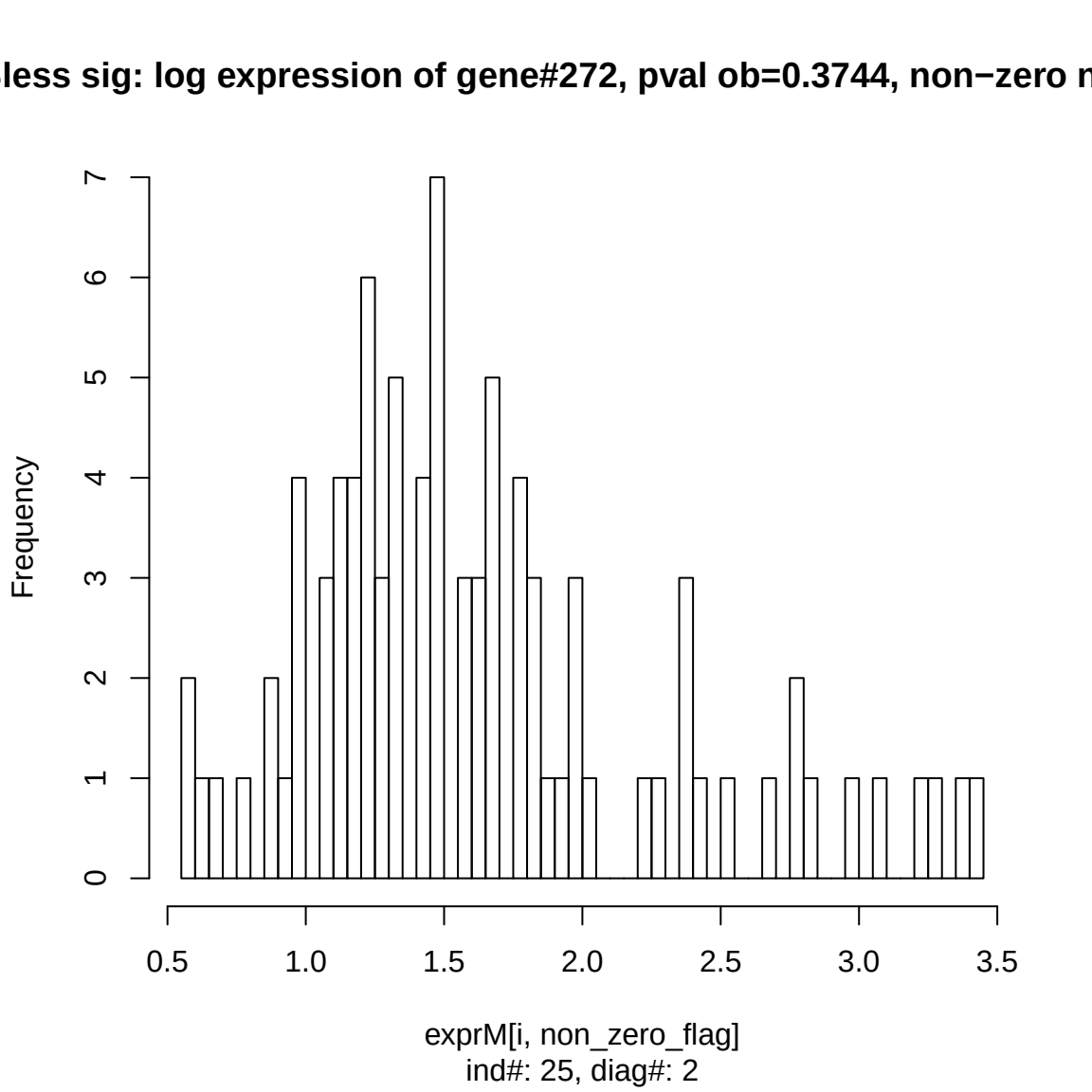

KSless sig: individual expression cell count of gene#225
Frequency
0
1
2
3
4
5
6
7
2
4
6
8
10
12
table(meta$individual[non_zero_flag])

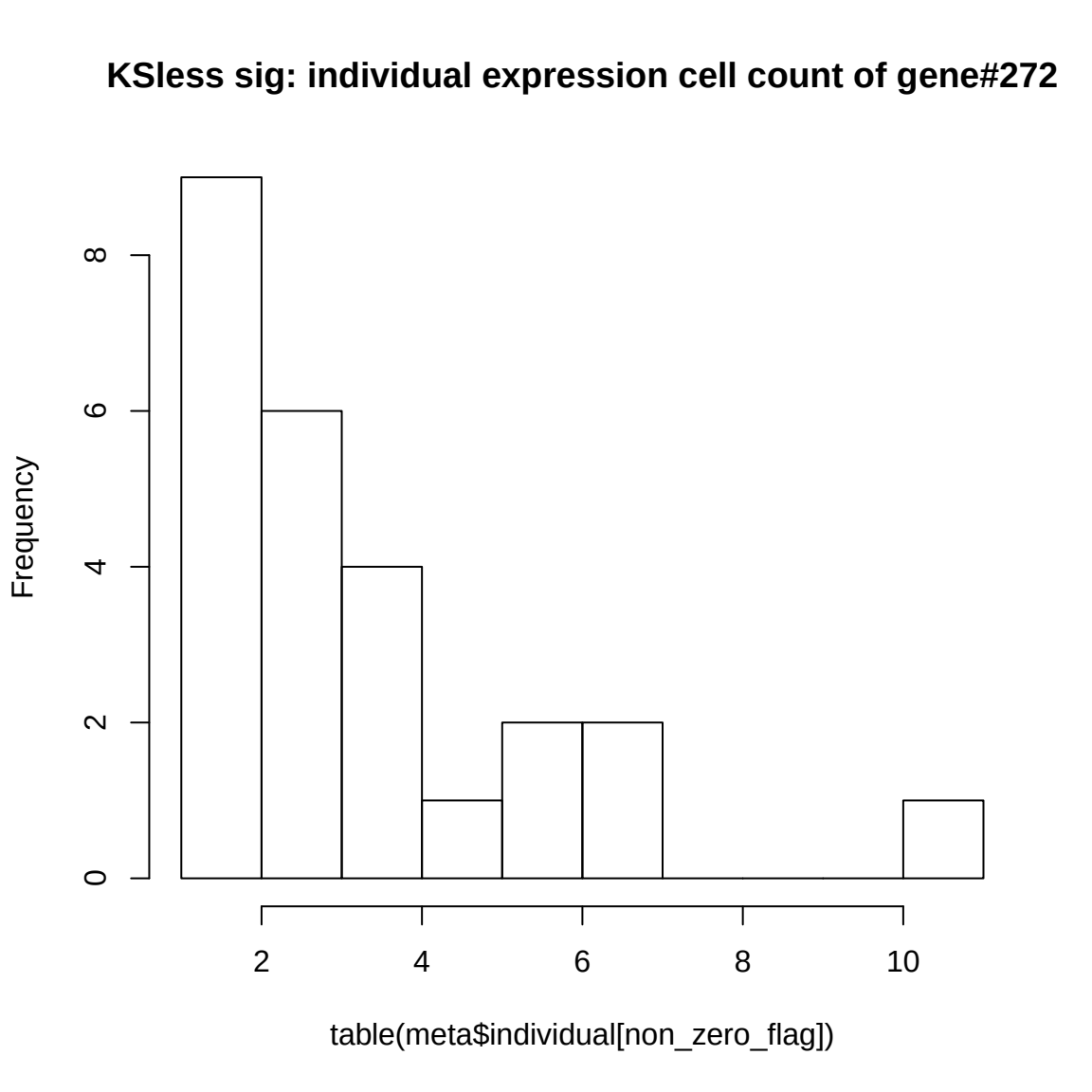

less sig: log expression of gene#232, pval ob=0.1195, non−zero nu
Frequency
0
5
10
15
1
2
3
4
exprM[i, non_zero_flag]
ind#: 30, diag#: 2

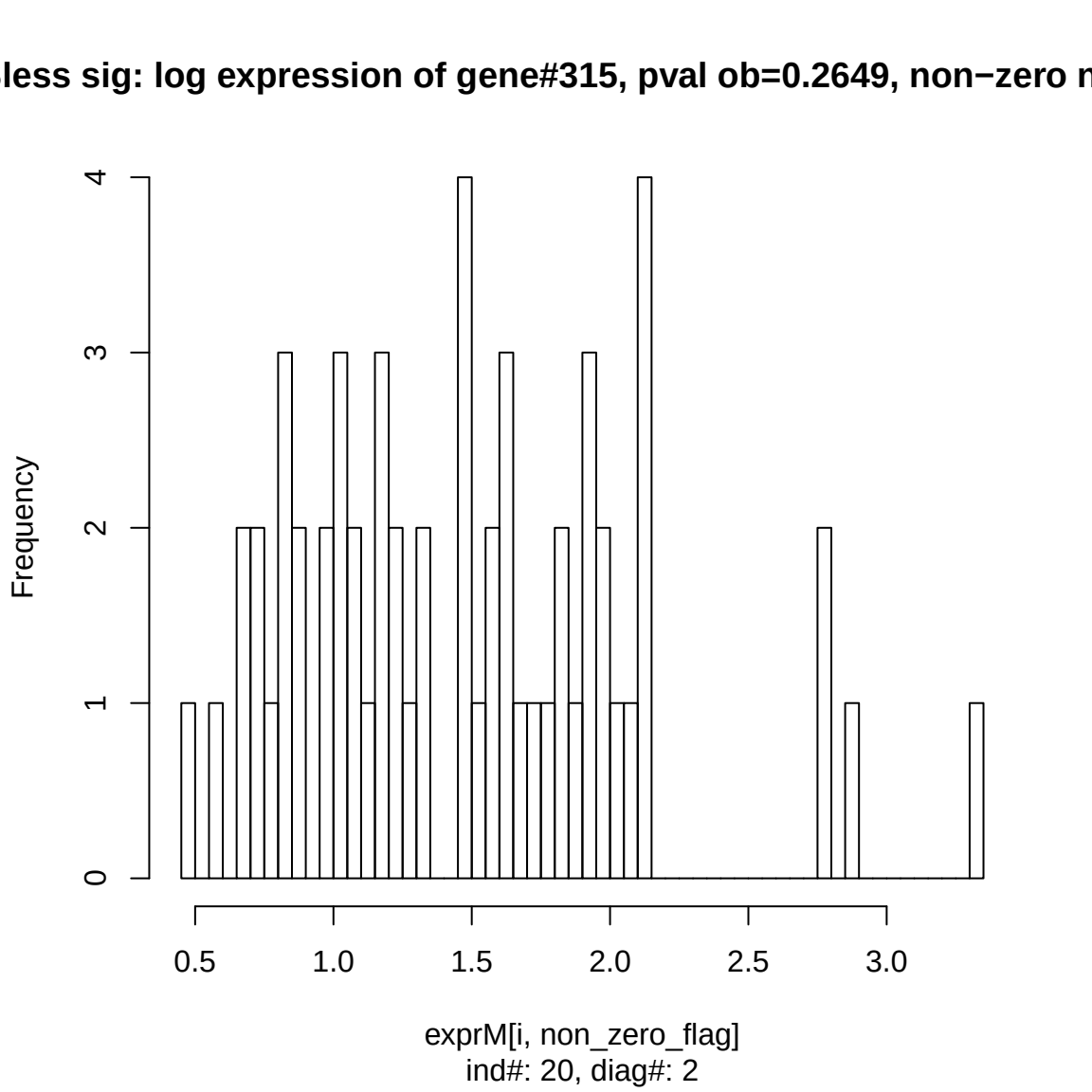

KSless sig: individual expression cell count of gene#232
Frequency
0
1
2
3
4
5
6
0
5
10
15
20
table(meta$individual[non_zero_flag])

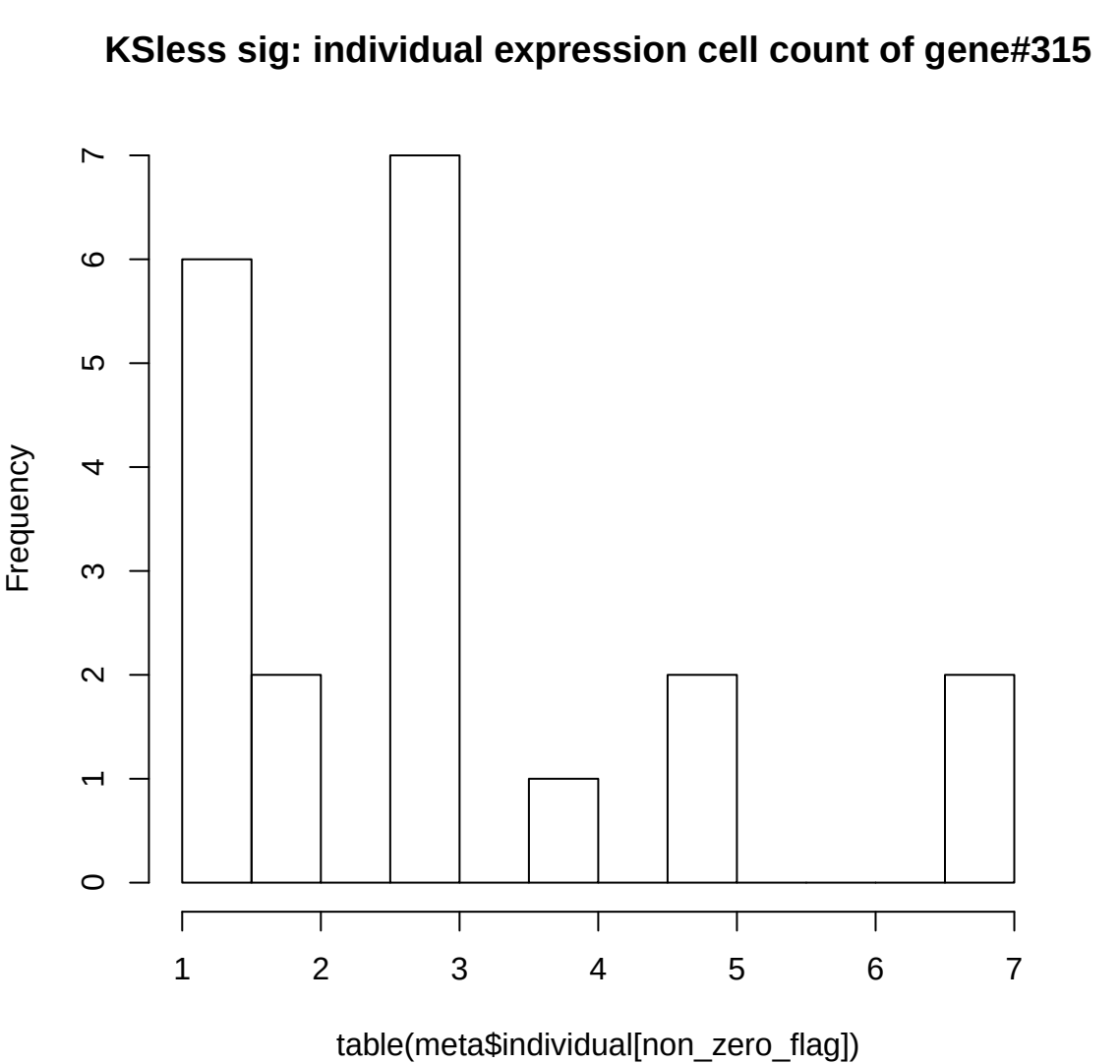

less sig: log expression of gene#239, pval ob=0.5923, non−zero n
Frequency
0
1
2
3
4
5
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 22, diag#: 2

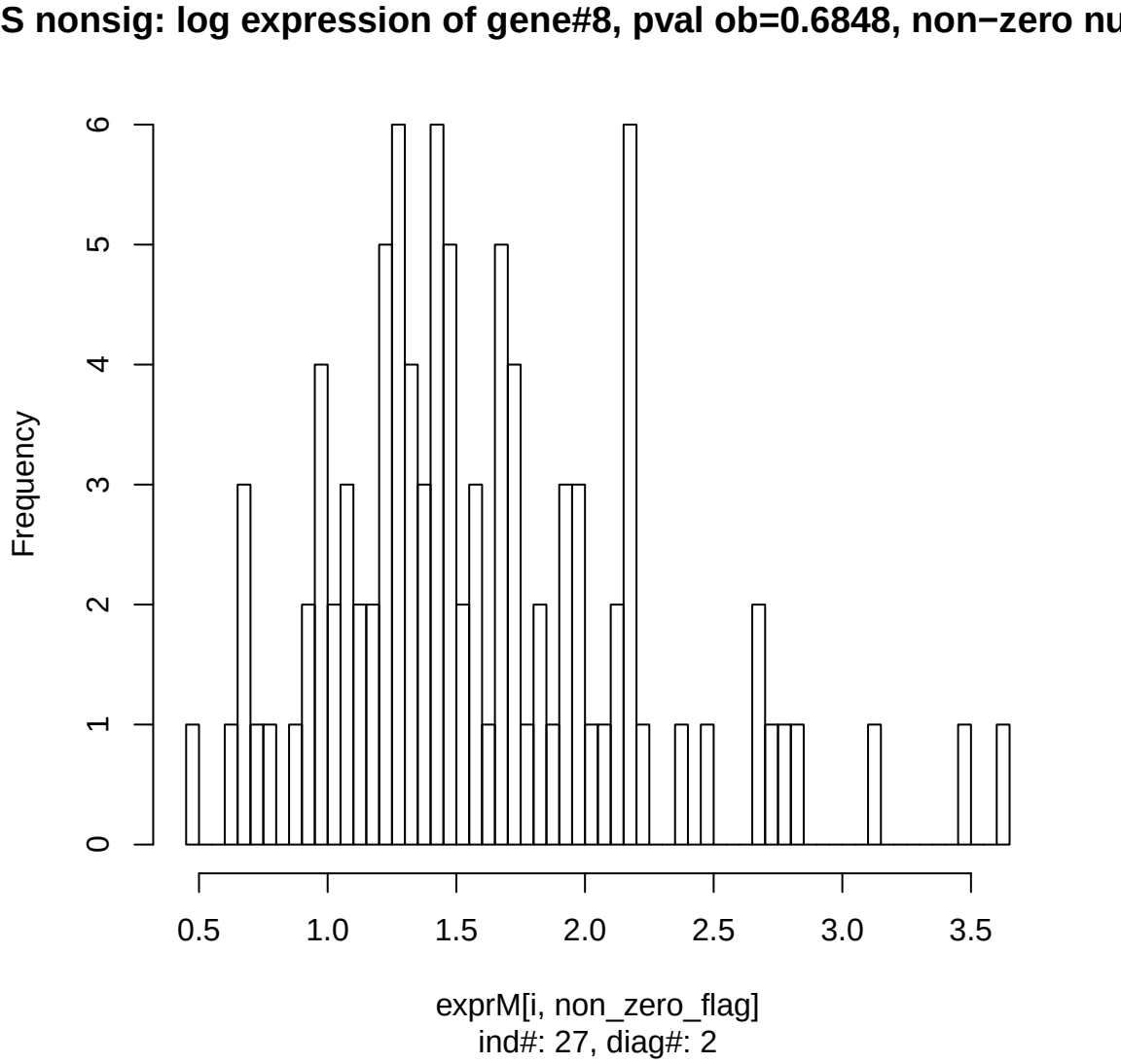

KSless sig: individual expression cell count of gene#239
Frequency
0
2
4
6
8
10
12
14
2
4
6
8
table(meta$individual[non_zero_flag])

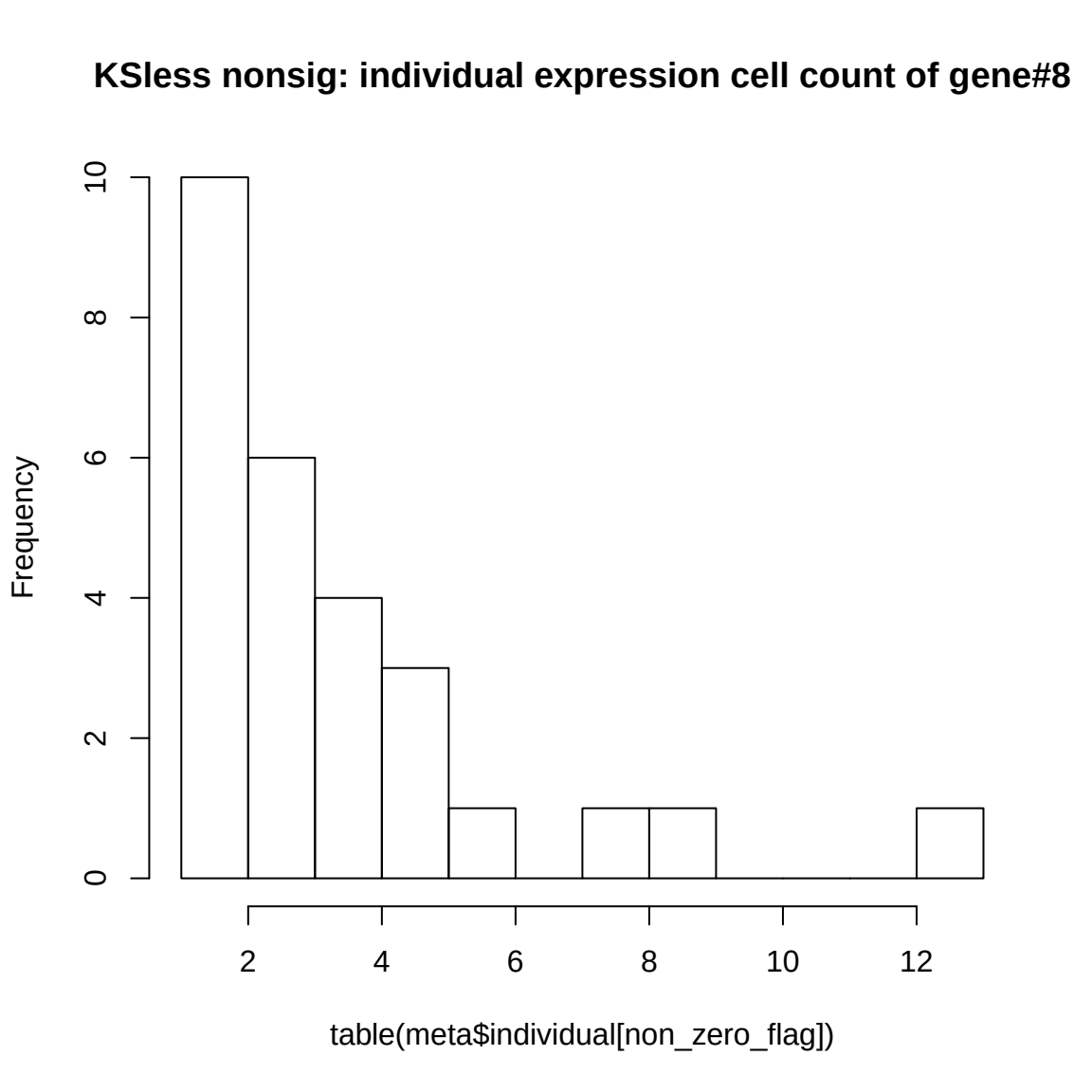

less sig: log expression of gene#272, pval ob=0.3744, non−zero n
Frequency
0
1
2
3
4
5
6
7
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 25, diag#: 2

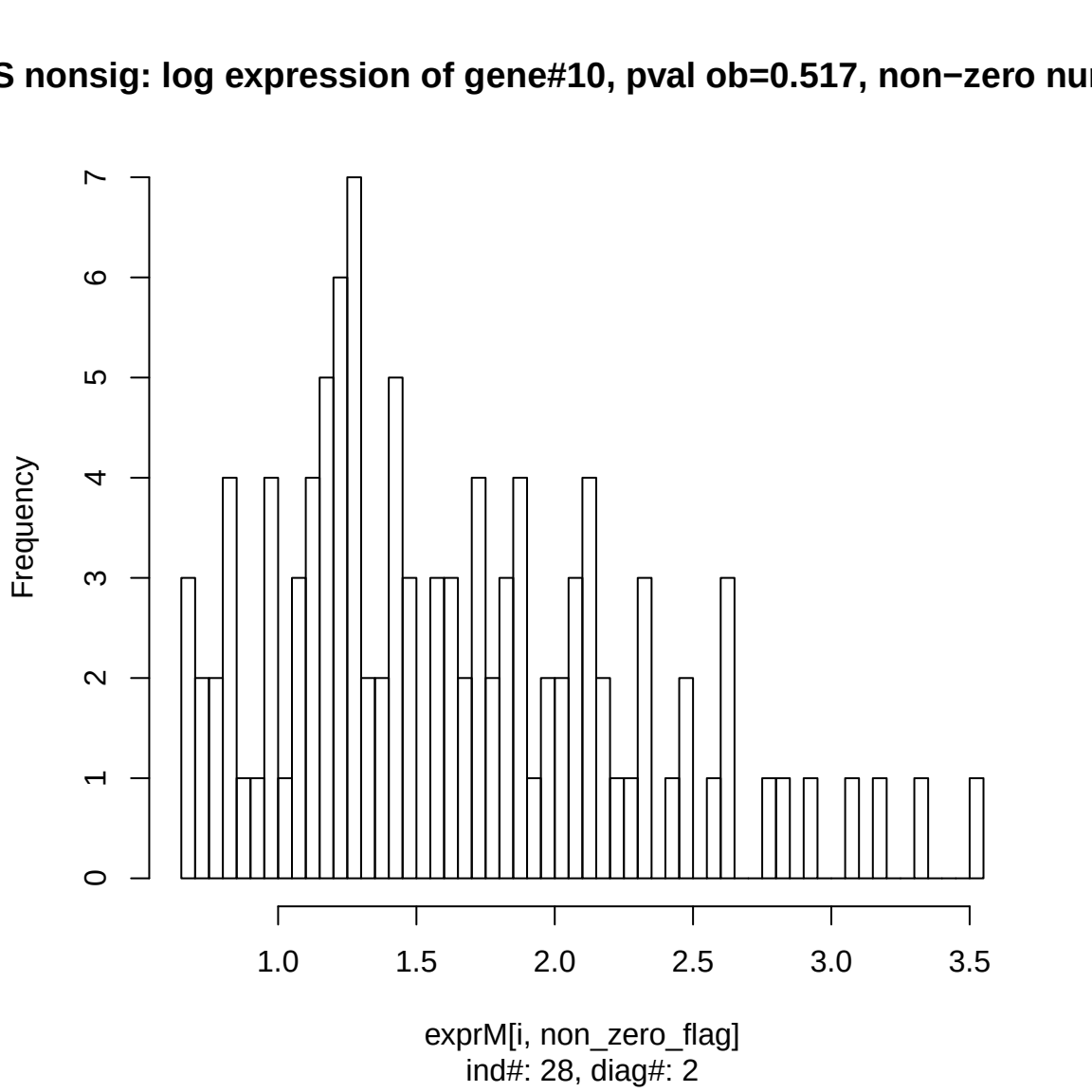

KSless sig: individual expression cell count of gene#272
Frequency
0
2
4
6
8
2
4
6
8
10
table(meta$individual[non_zero_flag])

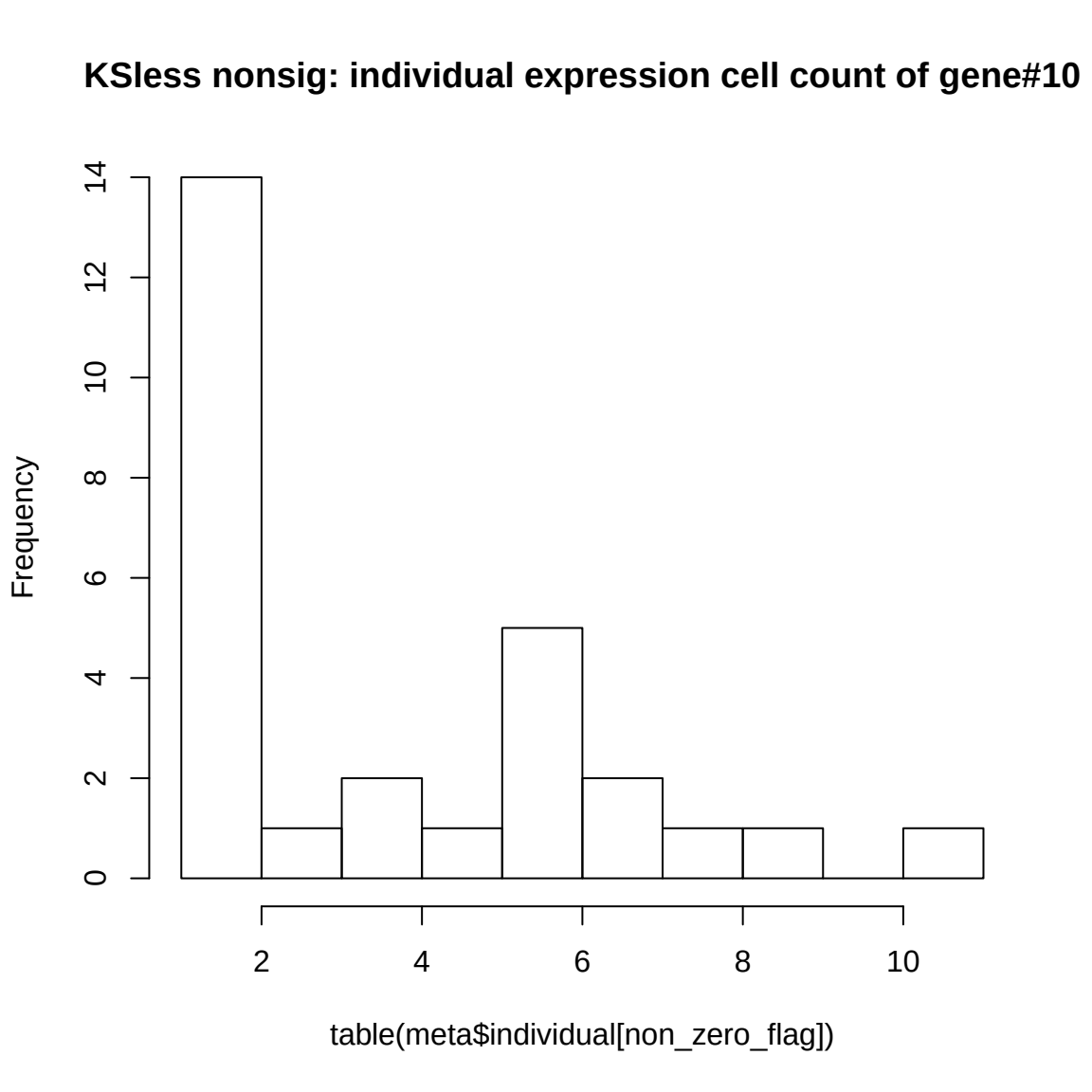

less sig: log expression of gene#315, pval ob=0.2649, non−zero n
Frequency
0
1
2
3
4
0.5
1.0
1.5
2.0
2.5
3.0
exprM[i, non_zero_flag]
ind#: 20, diag#: 2

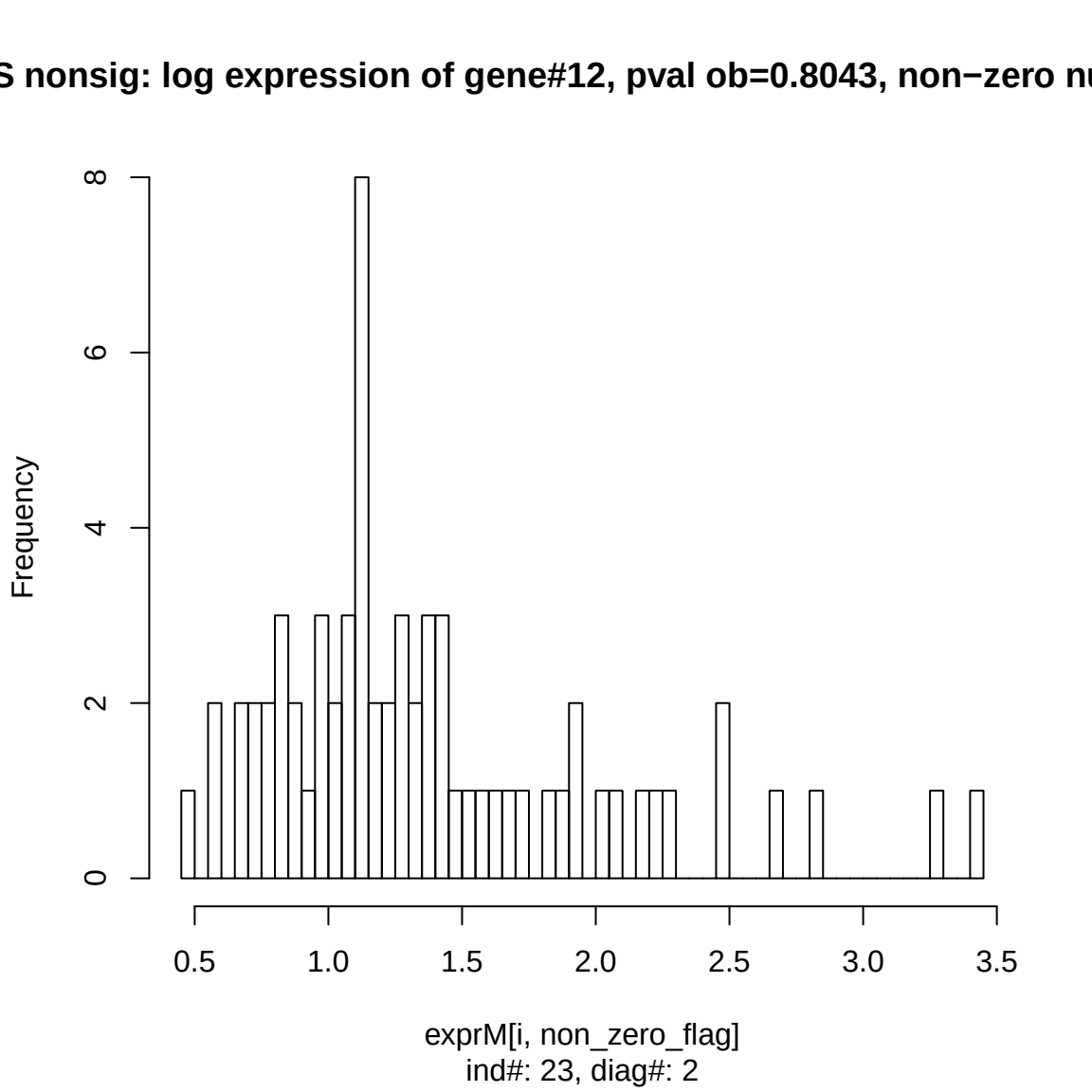

KSless sig: individual expression cell count of gene#315
Frequency
0
1
2
3
4
5
6
7
1
2
3
4
5
6
7
table(meta$individual[non_zero_flag])

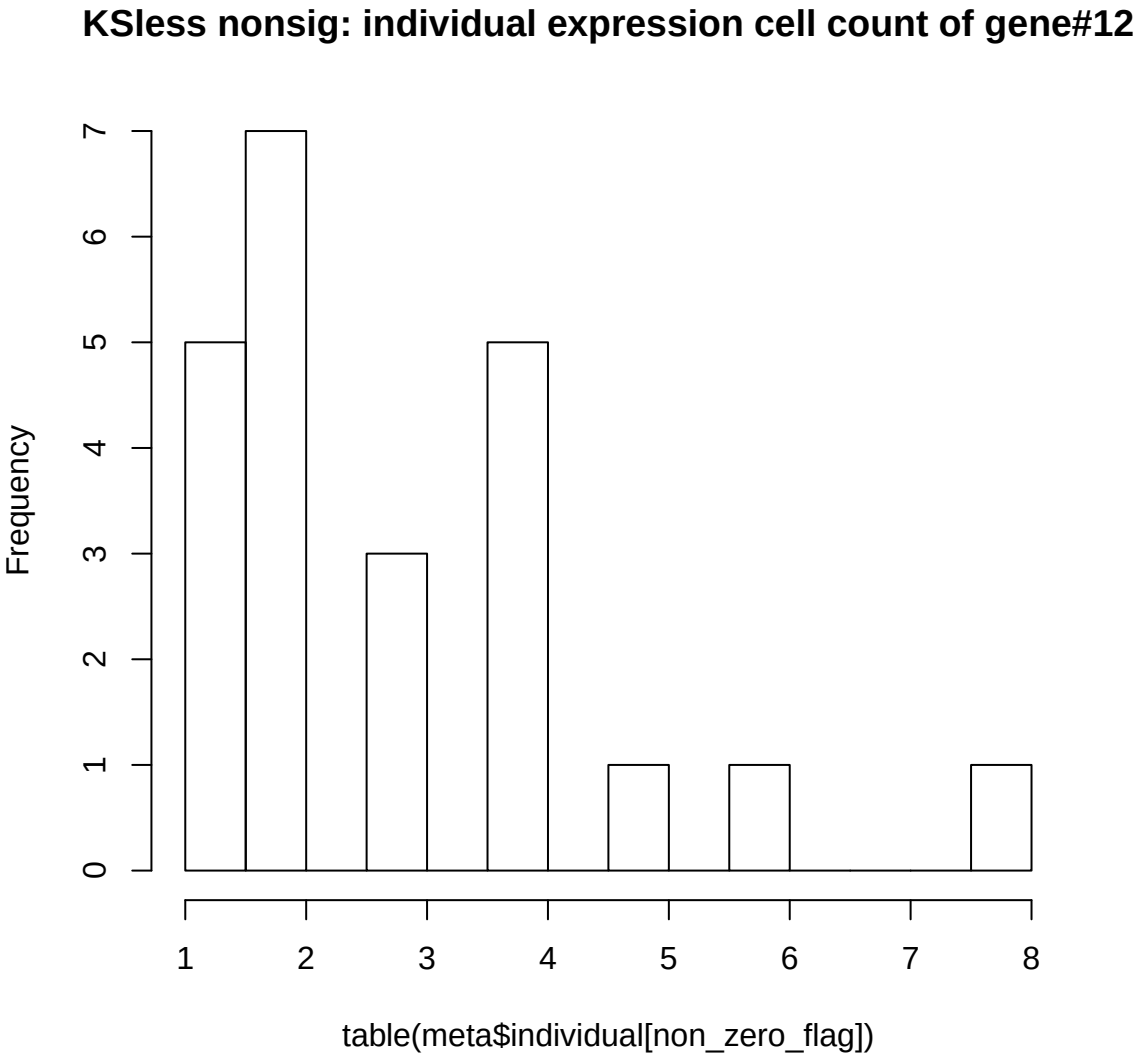

S nonsig: log expression of gene#8, pval ob=0.6848, non−zero nu
Frequency
0
1
2
3
4
5
6
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 27, diag#: 2

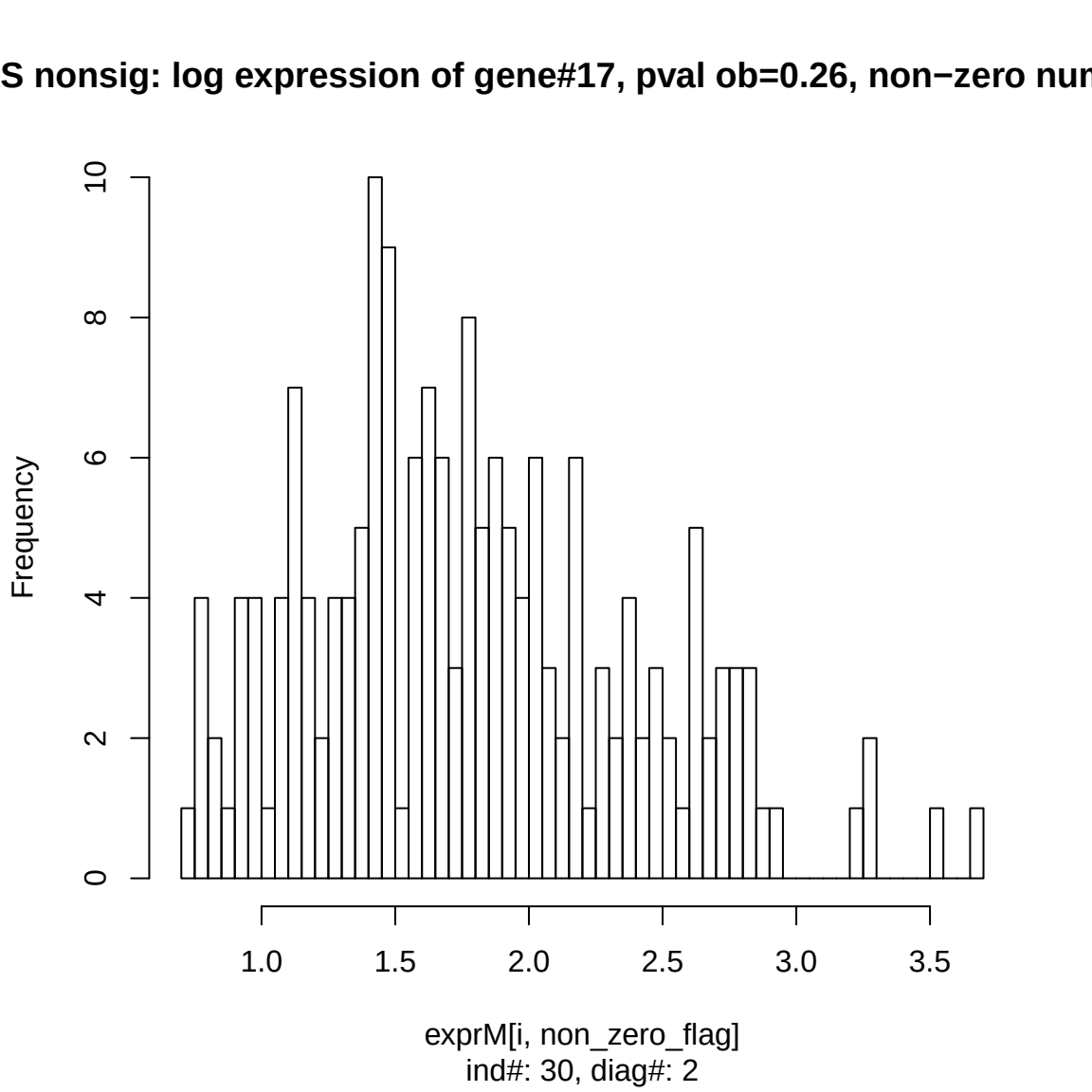

KSless nonsig: individual expression cell count of gene#8
Frequency
0
2
4
6
8
10
2
4
6
8
10
12
table(meta$individual[non_zero_flag])

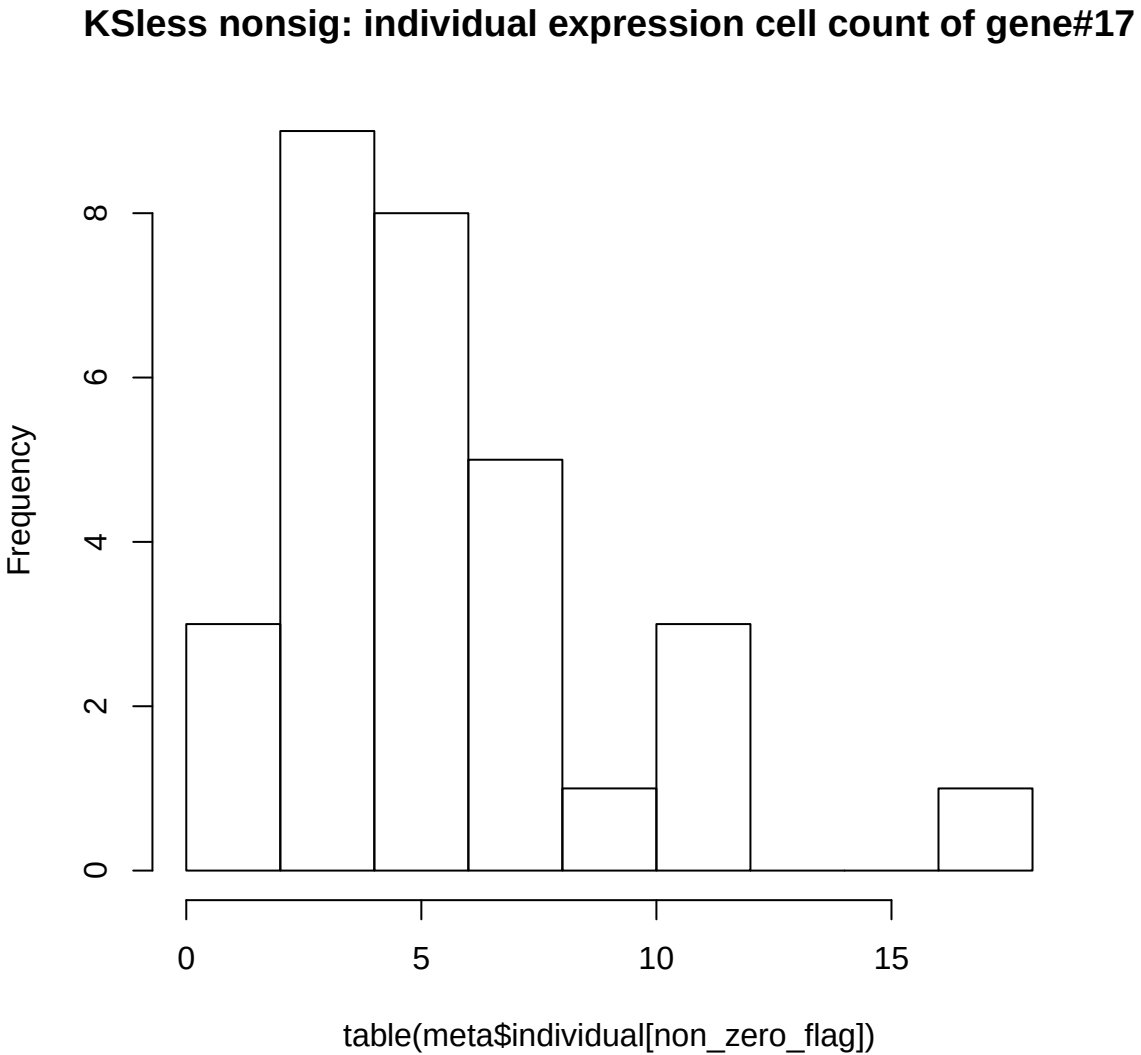

S nonsig: log expression of gene#10, pval ob=0.517, non−zero nu
Frequency
0
1
2
3
4
5
6
7
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 28, diag#: 2

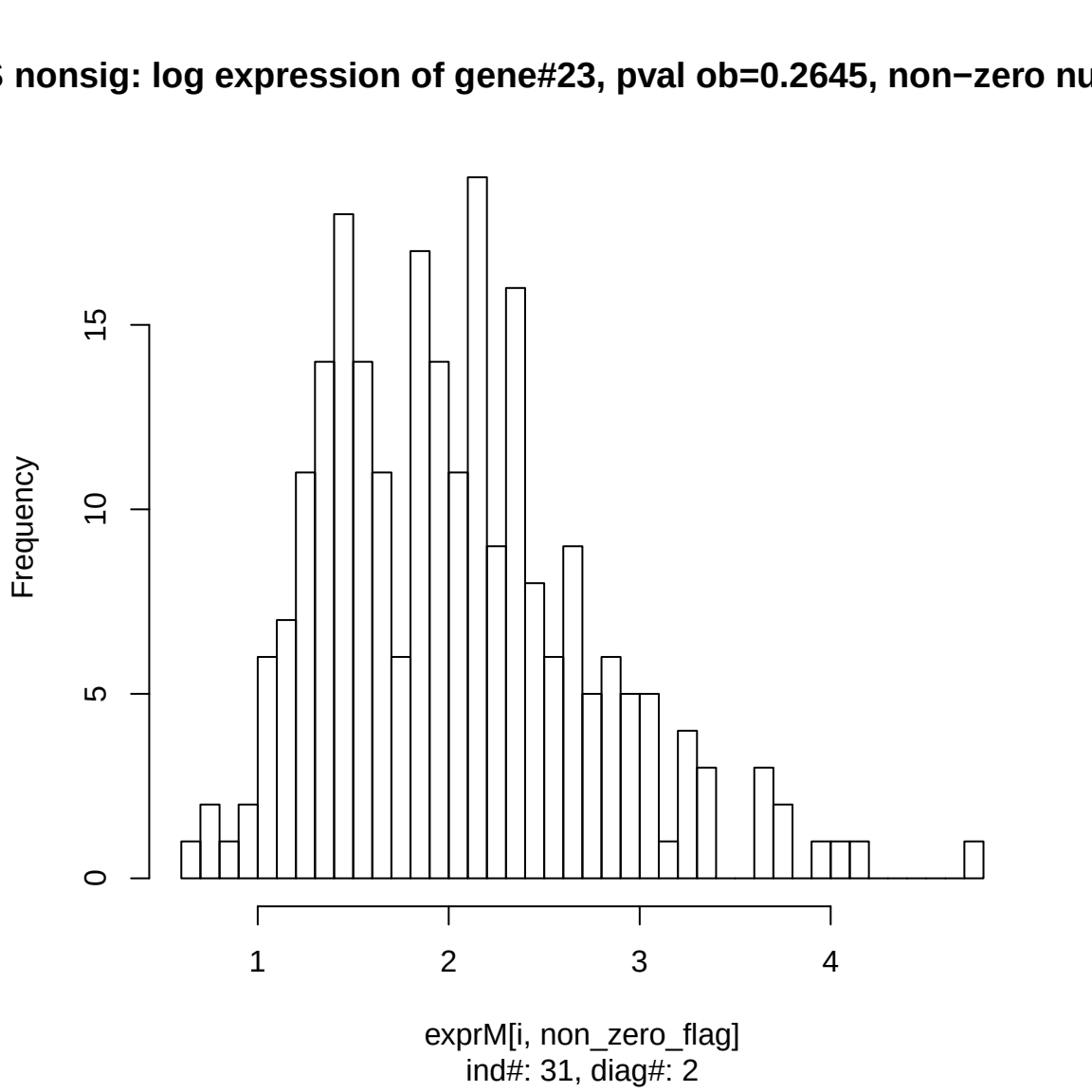

KSless nonsig: individual expression cell count of gene#10
Frequency
0
2
4
6
8
10
12
14
2
4
6
8
10
table(meta$individual[non_zero_flag])

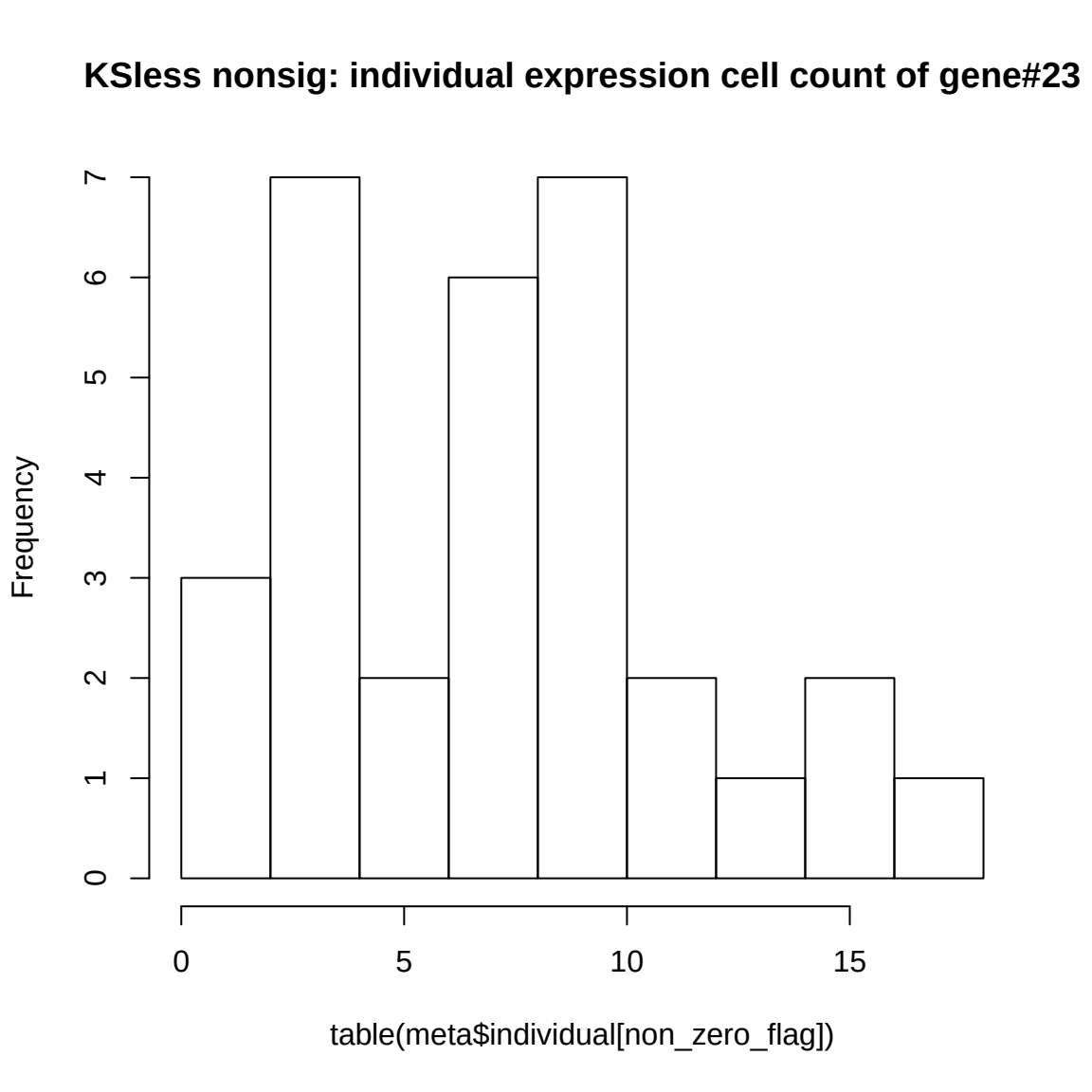

S nonsig: log expression of gene#12, pval ob=0.8043, non−zero nu
Frequency
0
2
4
6
8
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 23, diag#: 2

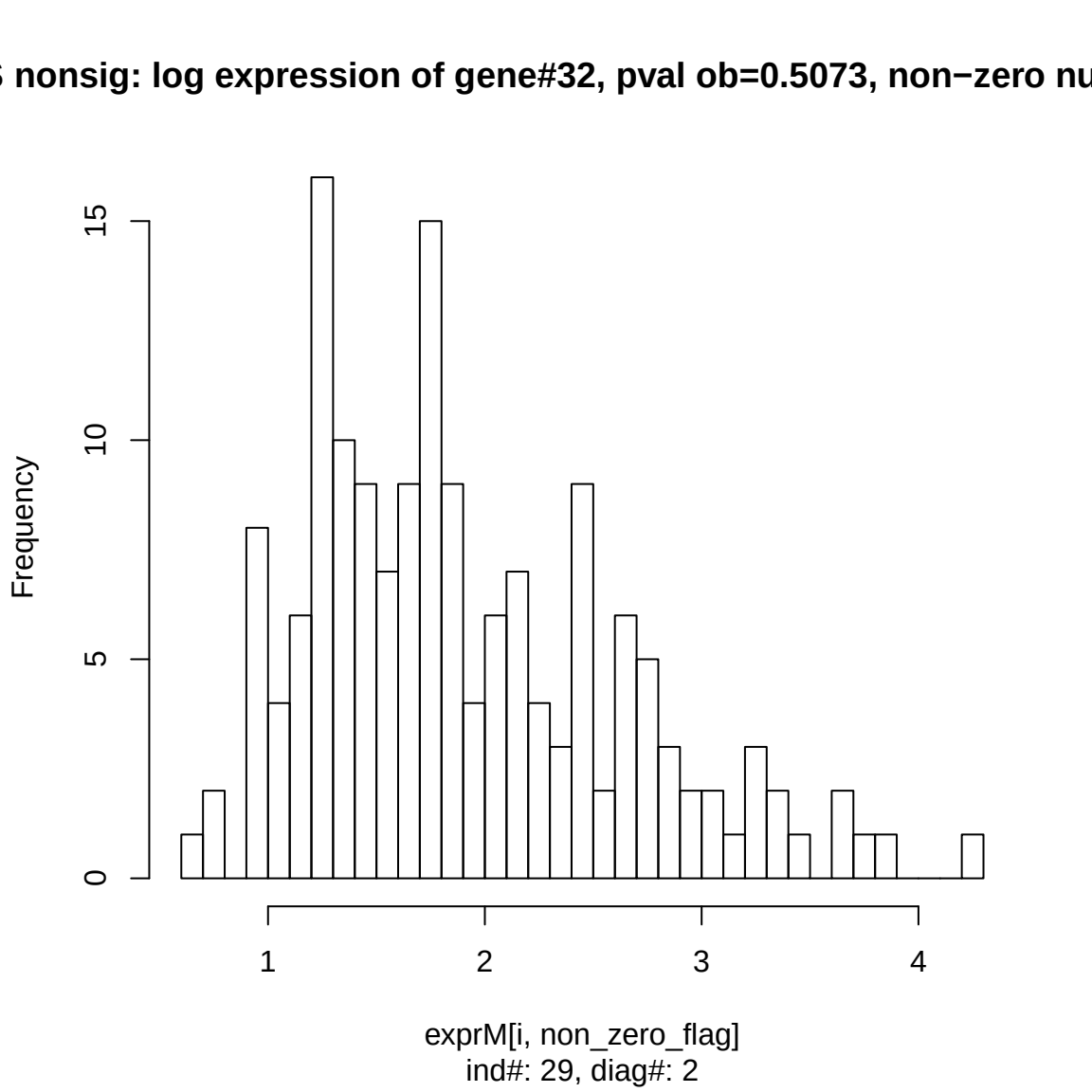

KSless nonsig: individual expression cell count of gene#12
Frequency
0
1
2
3
4
5
6
7
1
2
3
4
5
6
7
8
table(meta$individual[non_zero_flag])

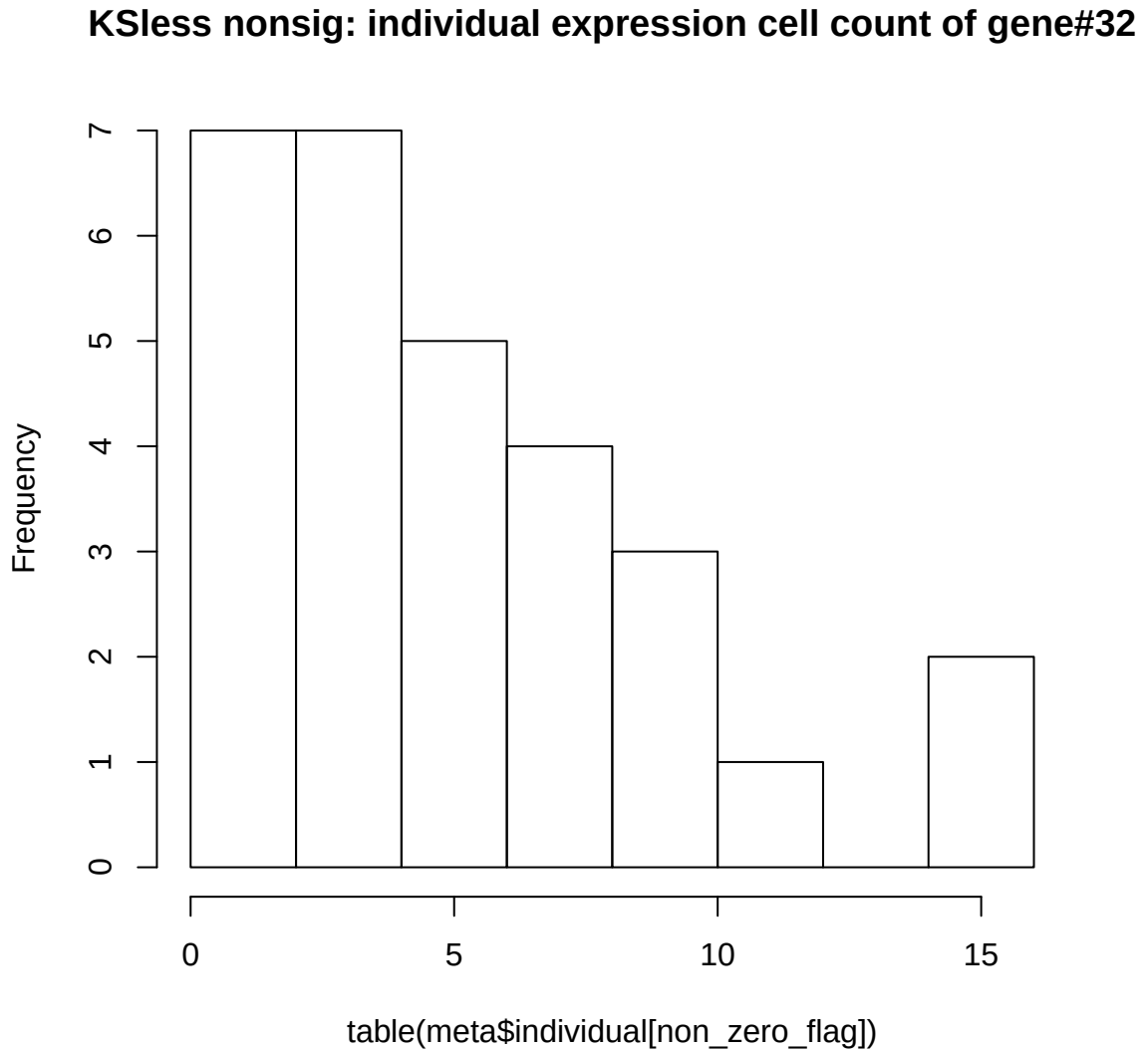

S nonsig: log expression of gene#17, pval ob=0.26, non−zero nur
Frequency
0
2
4
6
8
10
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 30, diag#: 2

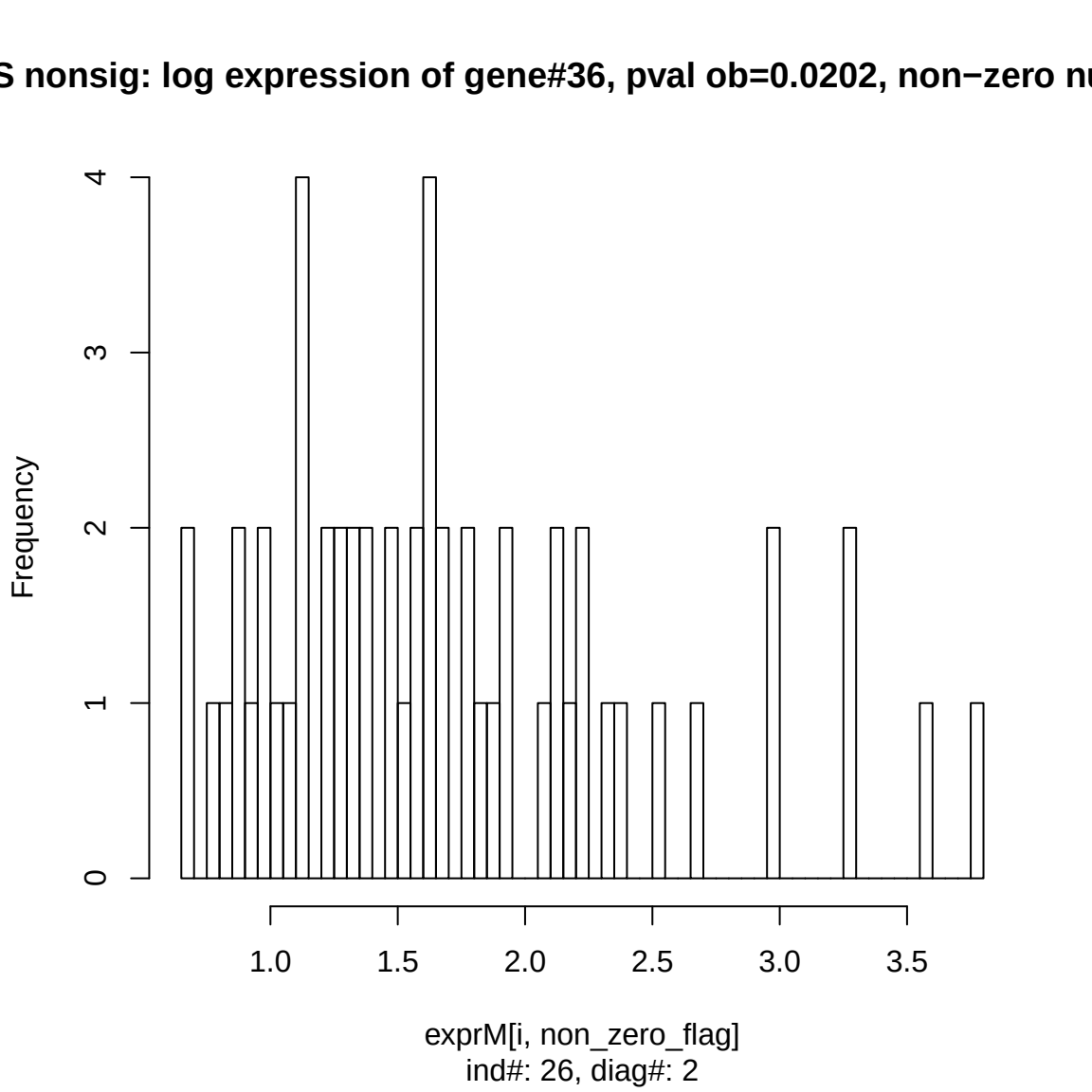

KSless nonsig: individual expression cell count of gene#17
Frequency
0
2
4
6
8
0
5
10
15
table(meta$individual[non_zero_flag])

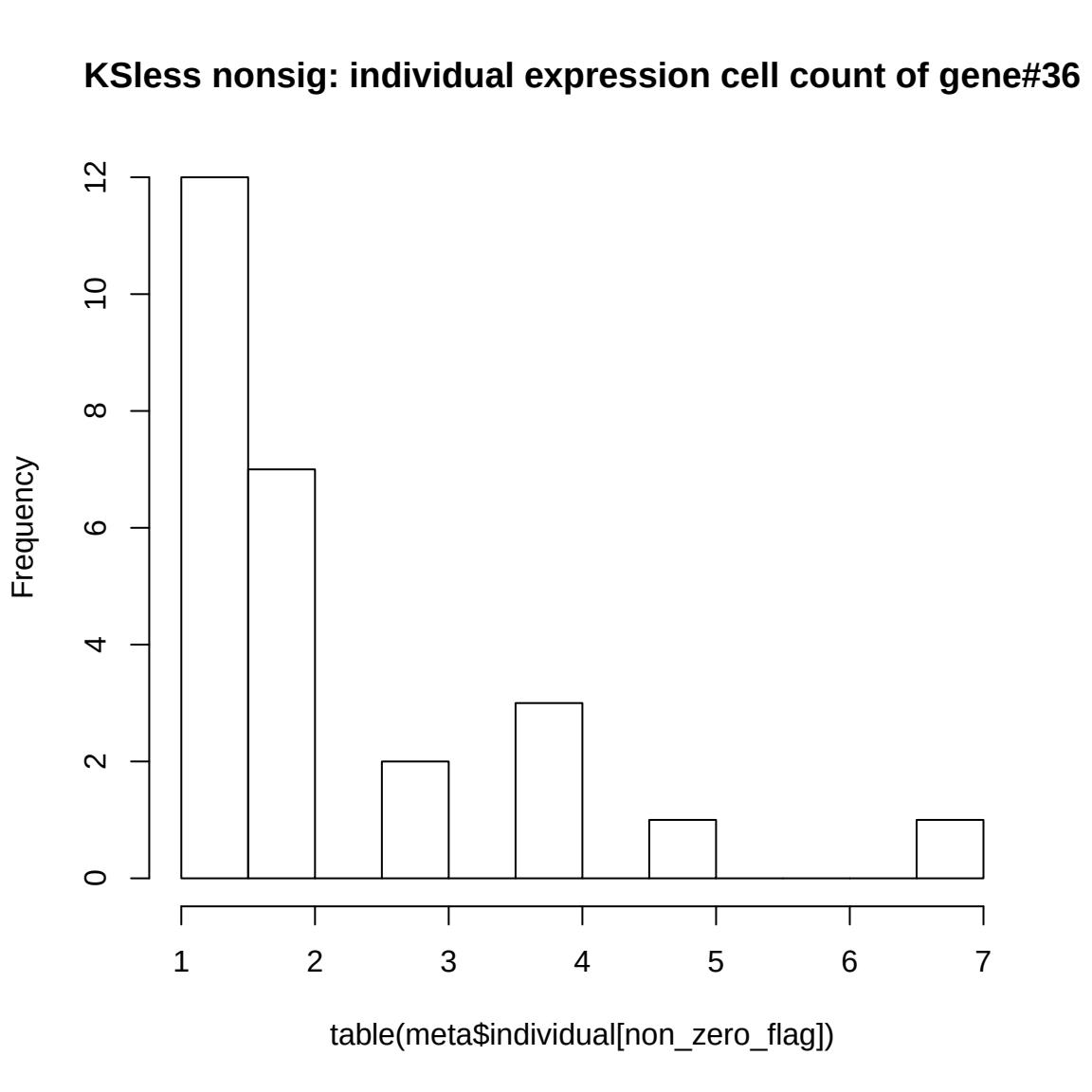

nonsig: log expression of gene#23, pval ob=0.2645, non−zero nu
Frequency
0
5
10
15
1
2
3
4
exprM[i, non_zero_flag]
ind#: 31, diag#: 2

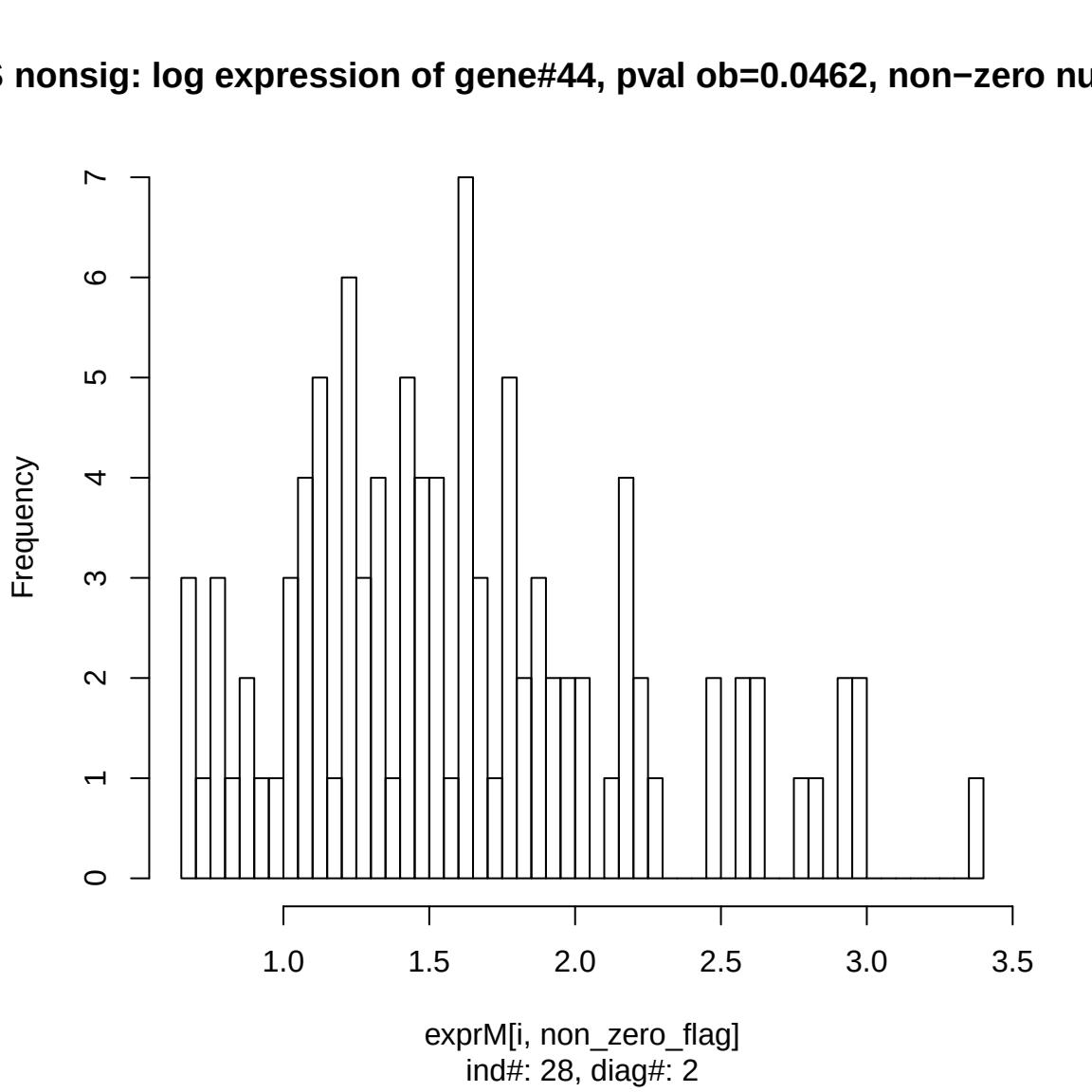

KSless nonsig: individual expression cell count of gene#23
Frequency
0
1
2
3
4
5
6
7
0
5
10
15
table(meta$individual[non_zero_flag])

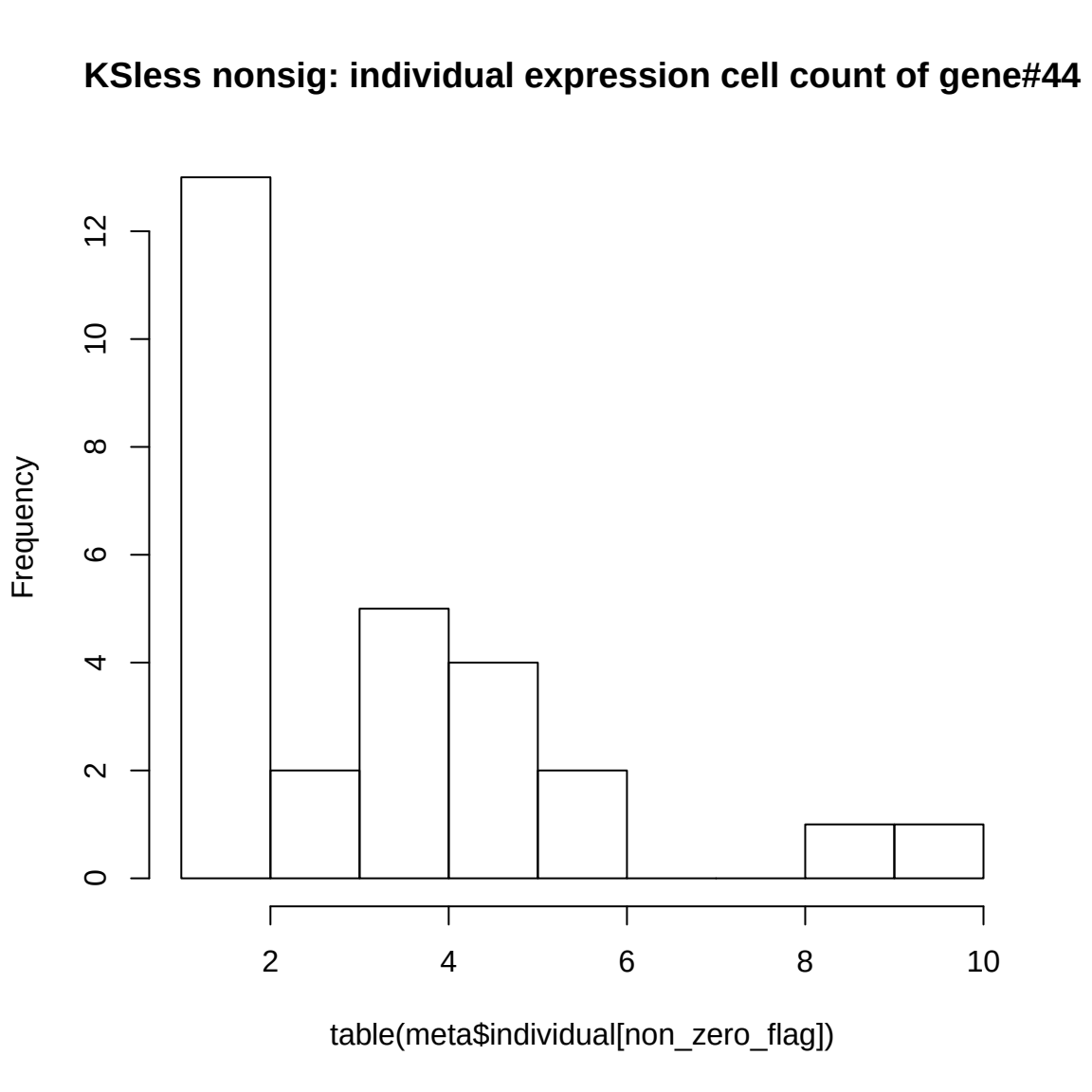

nonsig: log expression of gene#32, pval ob=0.5073, non−zero nu
Frequency
0
5
10
15
1
2
3
4
exprM[i, non_zero_flag]
ind#: 29, diag#: 2

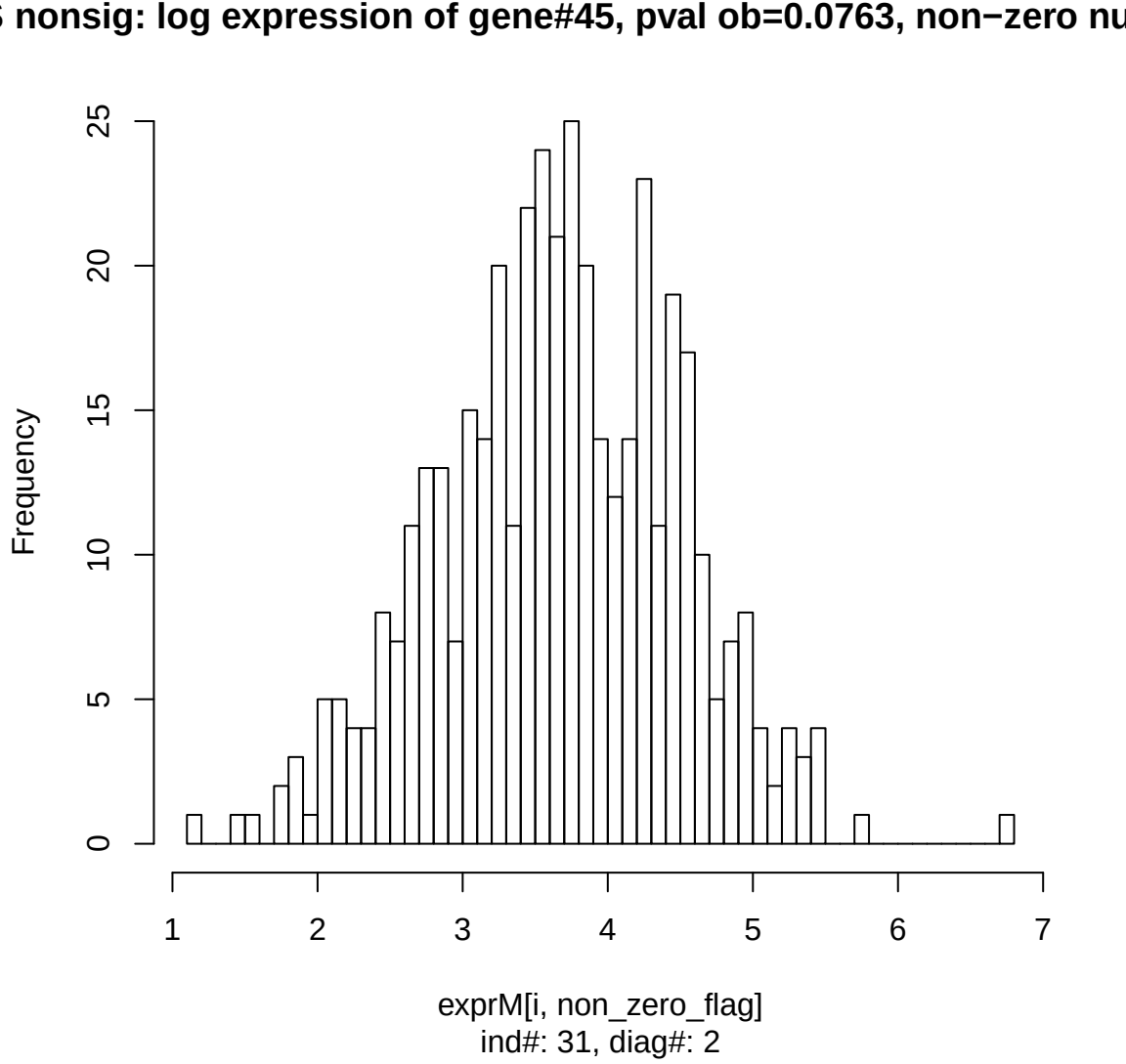

KSless nonsig: individual expression cell count of gene#32
Frequency
0
1
2
3
4
5
6
7
0
5
10
15
table(meta$individual[non_zero_flag])

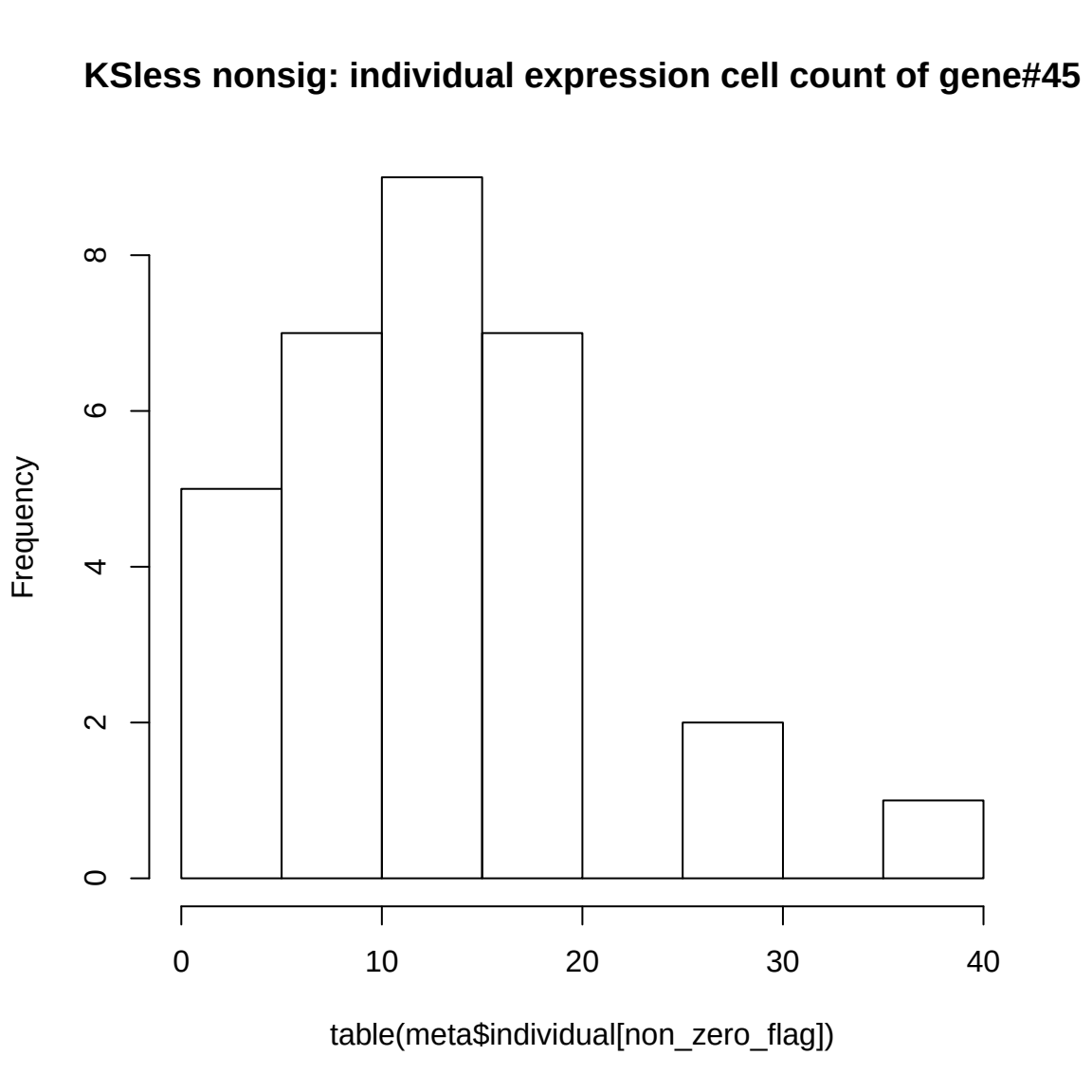

S nonsig: log expression of gene#36, pval ob=0.0202, non−zero nu
Frequency
0
1
2
3
4
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 26, diag#: 2

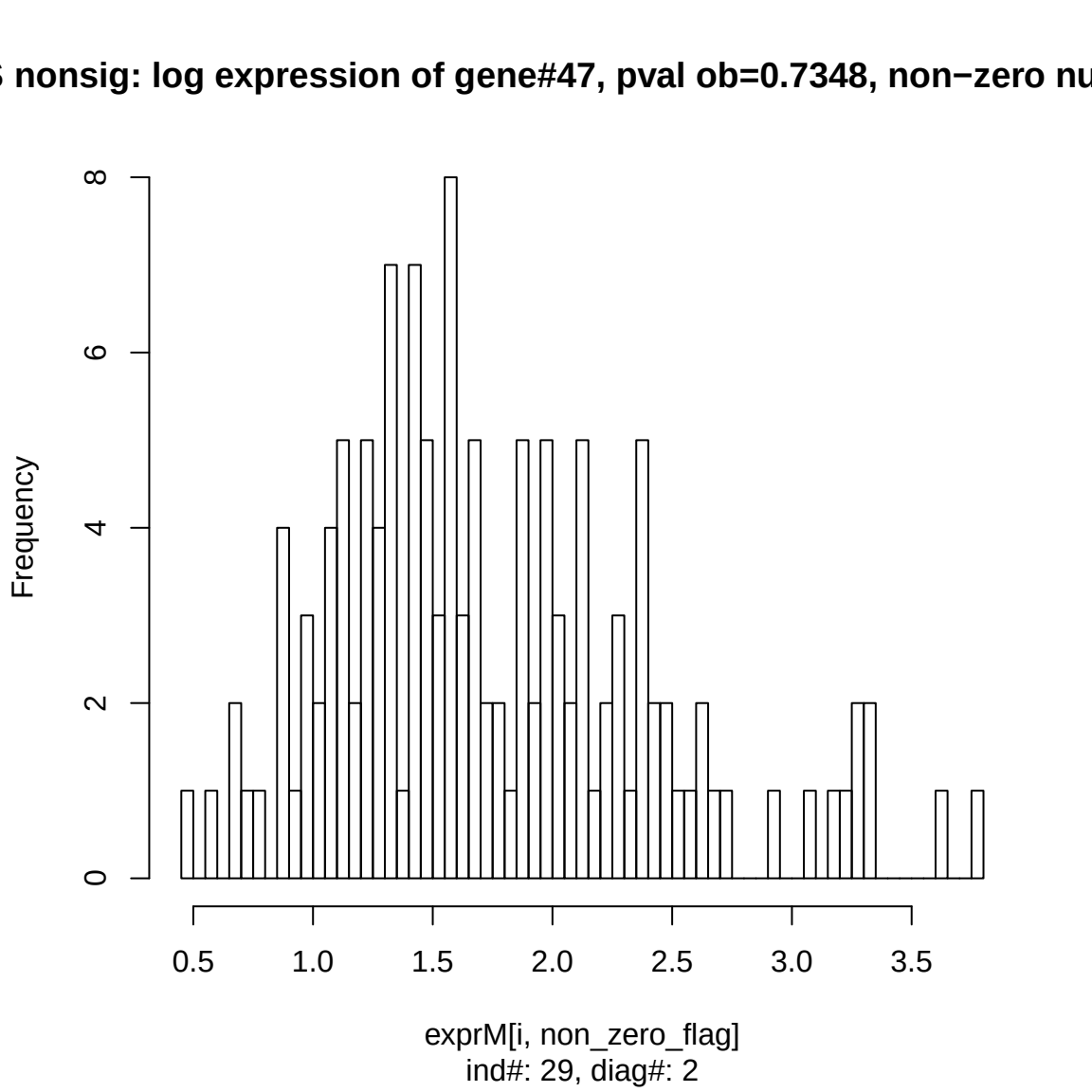

KSless nonsig: individual expression cell count of gene#36
Frequency
0
2
4
6
8
10
12
1
2
3
4
5
6
7
table(meta$individual[non_zero_flag])

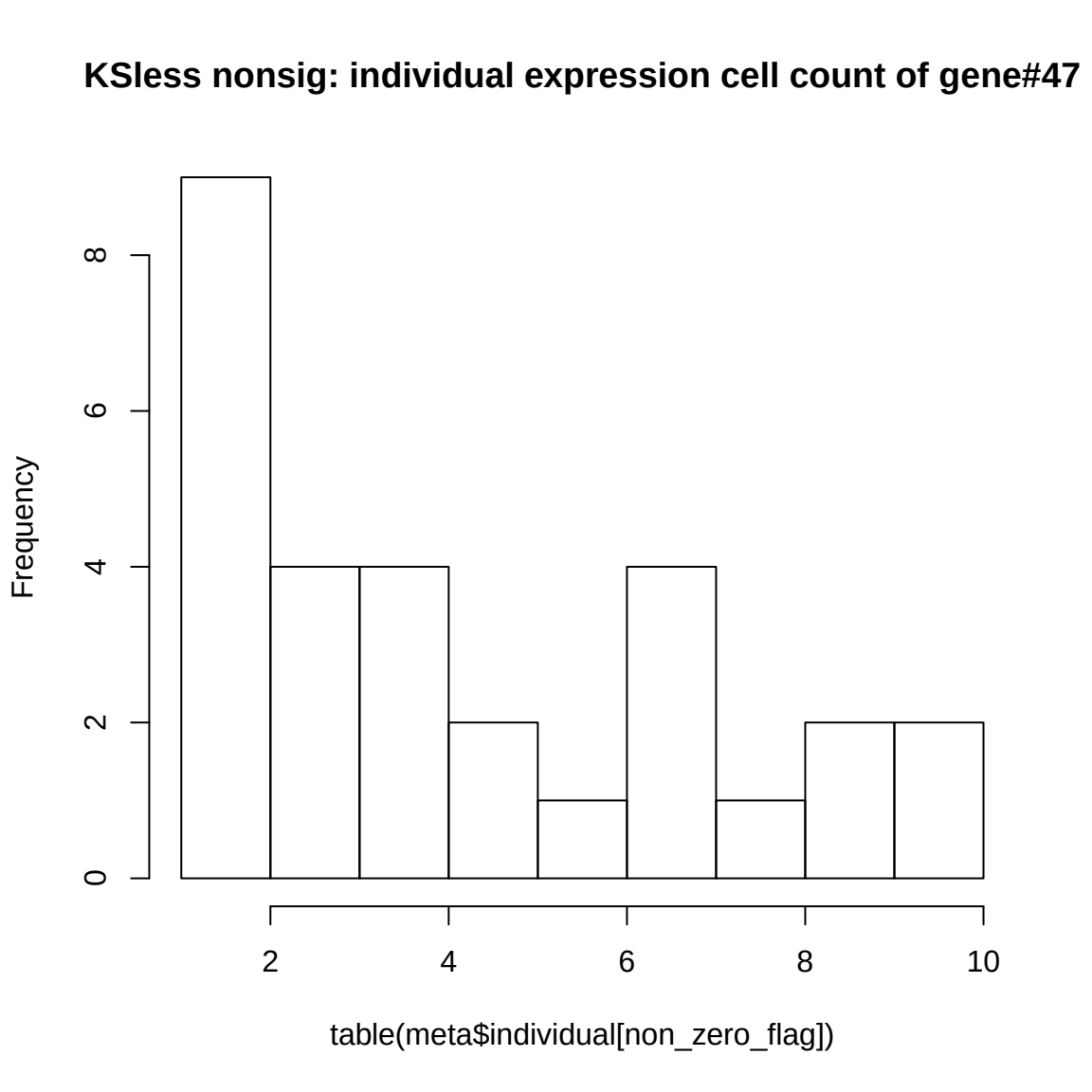

nonsig: log expression of gene#44, pval ob=0.0462, non−zero nu
Frequency
0
1
2
3
4
5
6
7
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 28, diag#: 2

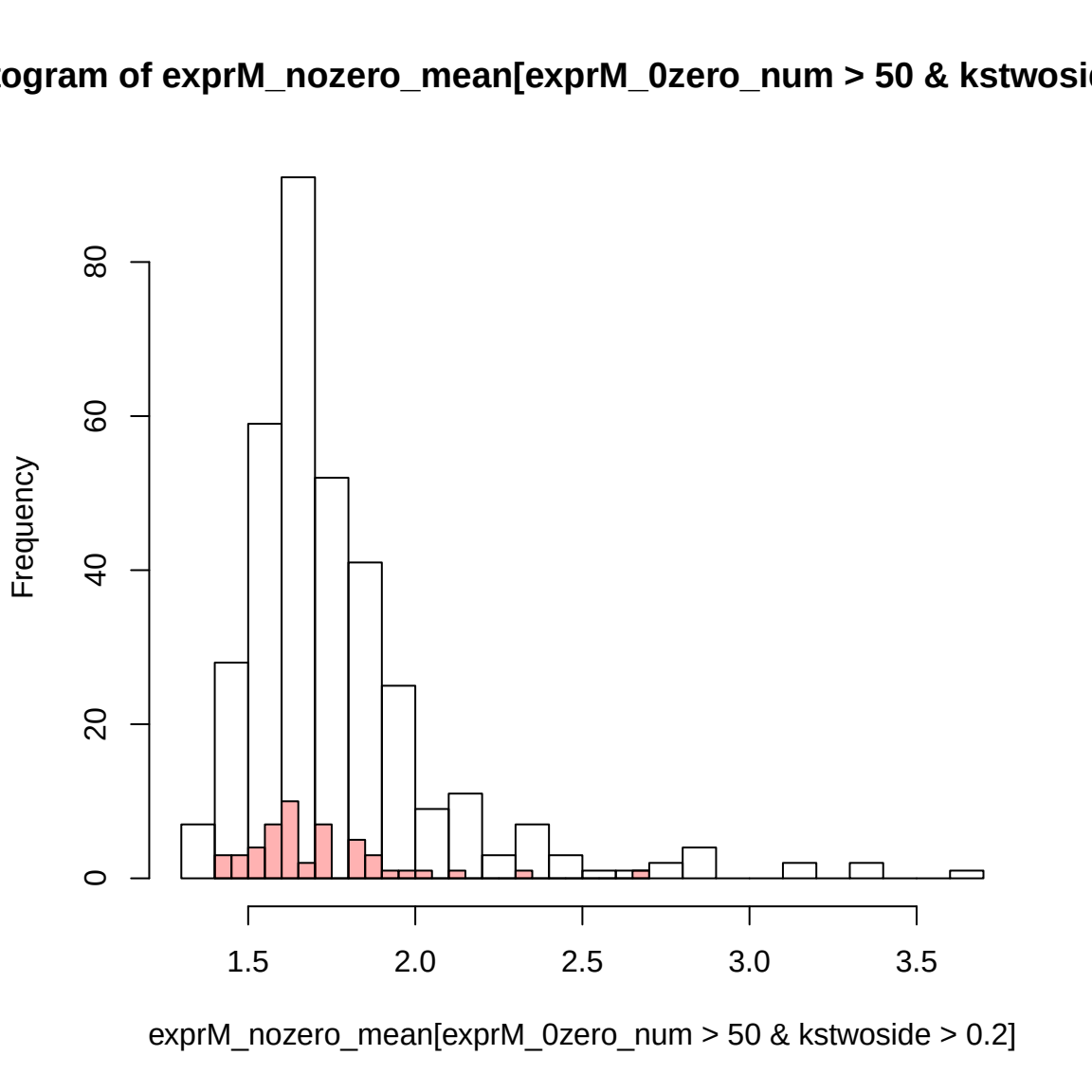

KSless nonsig: individual expression cell count of gene#44
Frequency
0
2
4
6
8
10
12
2
4
6
8
10
table(meta$individual[non_zero_flag])

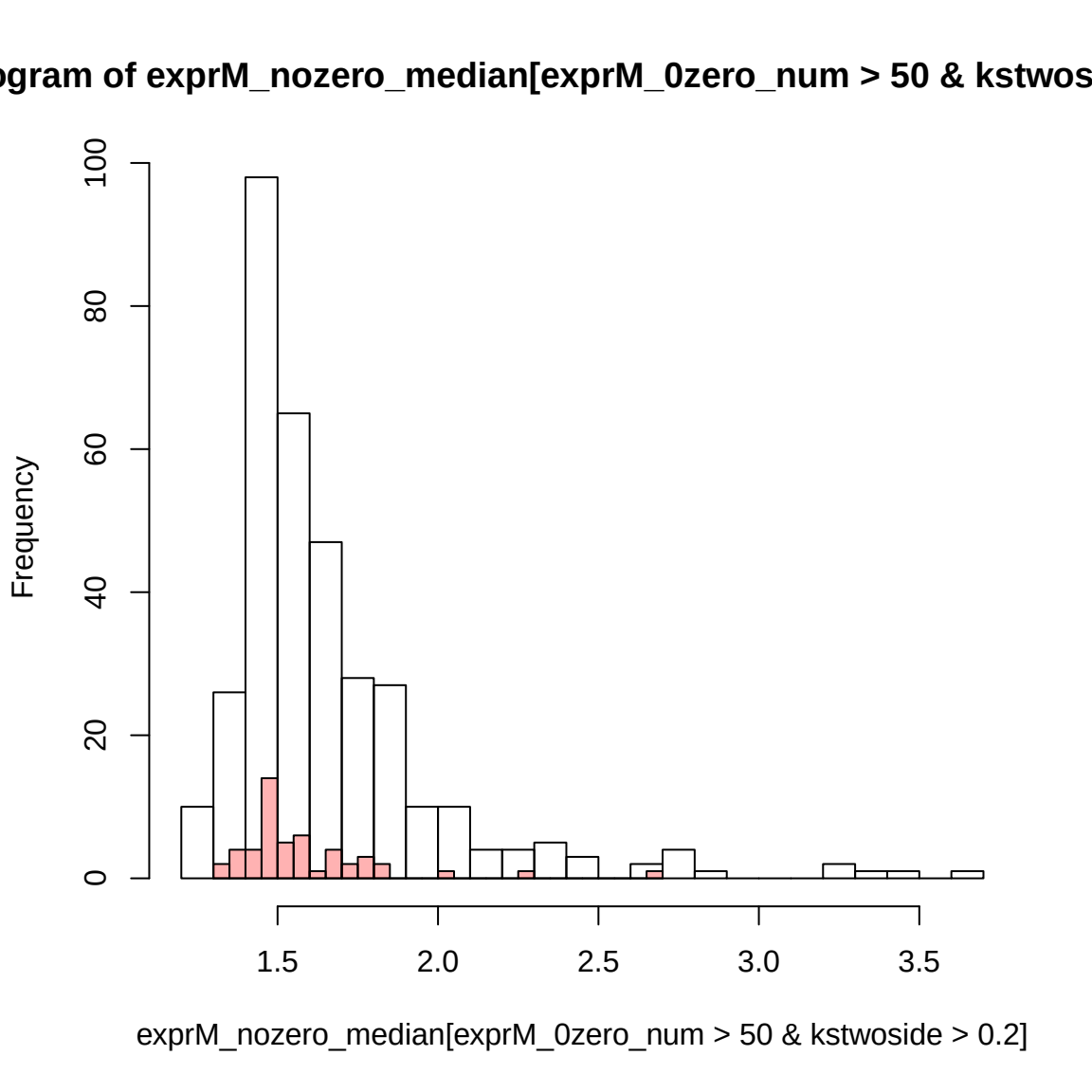

nonsig: log expression of gene#45, pval ob=0.0763, non−zero nu
Frequency
0
5
10
15
20
25
1
2
3
4
5
6
7
exprM[i, non_zero_flag]
ind#: 31, diag#: 2

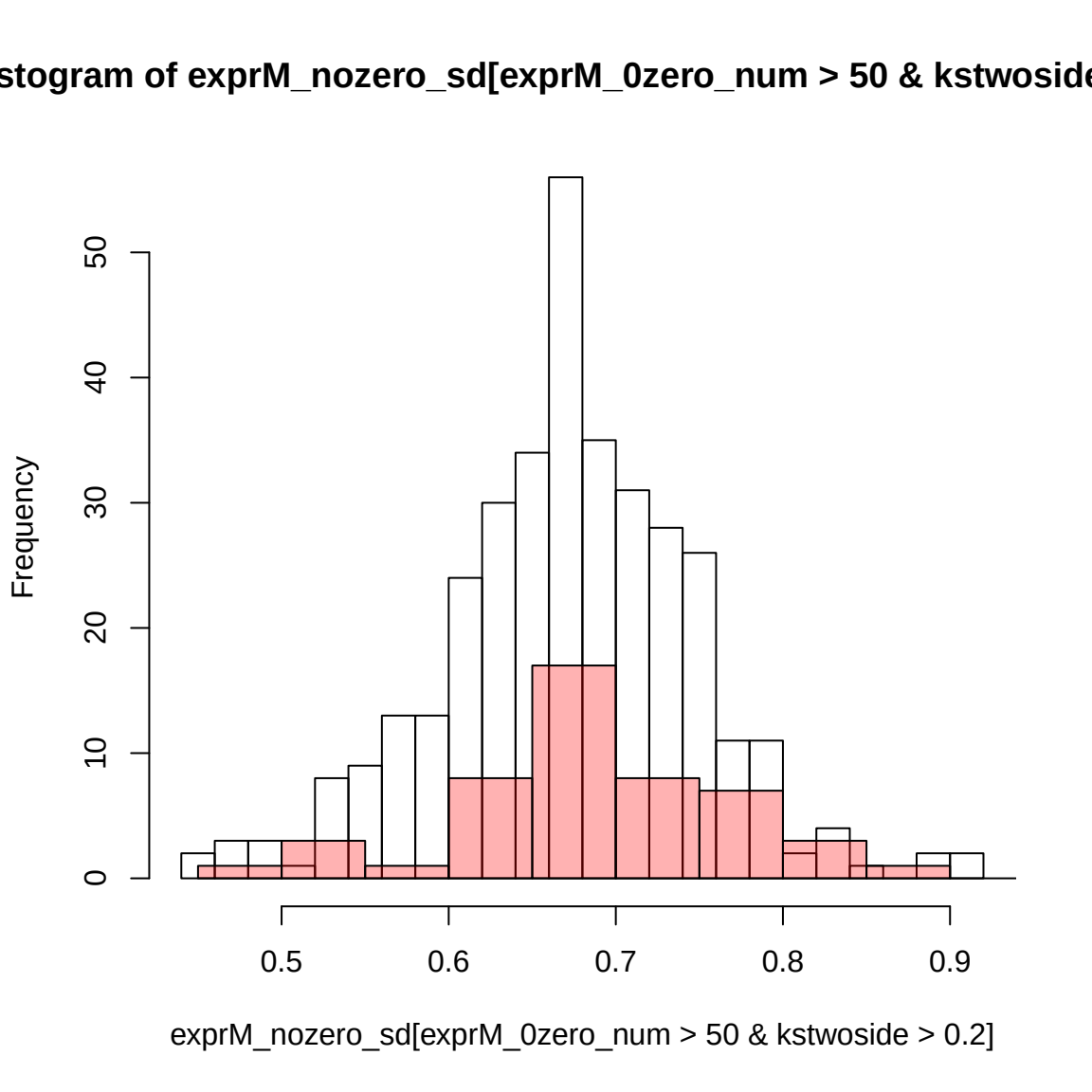

KSless nonsig: individual expression cell count of gene#45
Frequency
0
2
4
6
8
0
10
20
30
40
table(meta$individual[non_zero_flag])

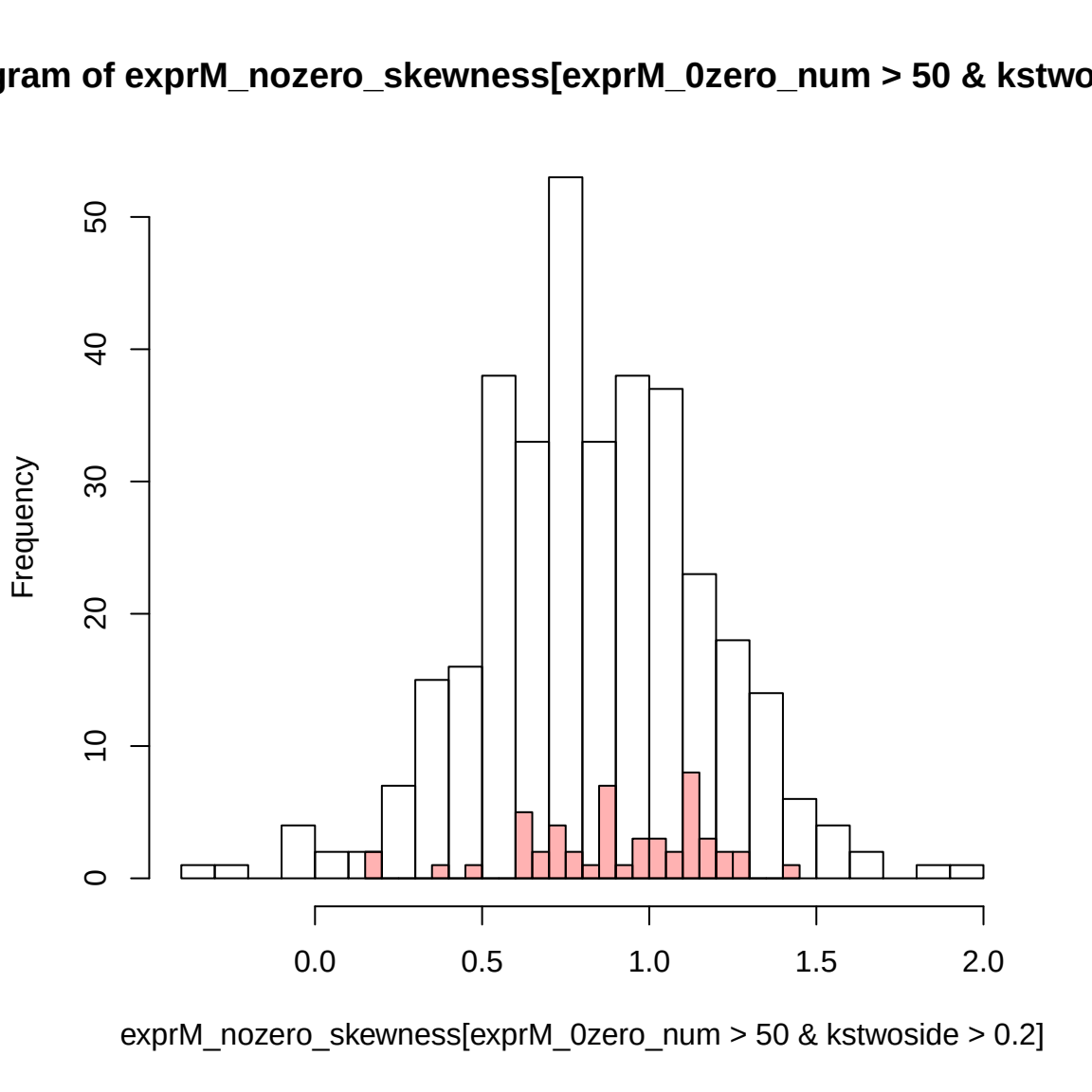

nonsig: log expression of gene#47, pval ob=0.7348, non−zero nu
Frequency
0
2
4
6
8
0.5
1.0
1.5
2.0
2.5
3.0
3.5
exprM[i, non_zero_flag]
ind#: 29, diag#: 2

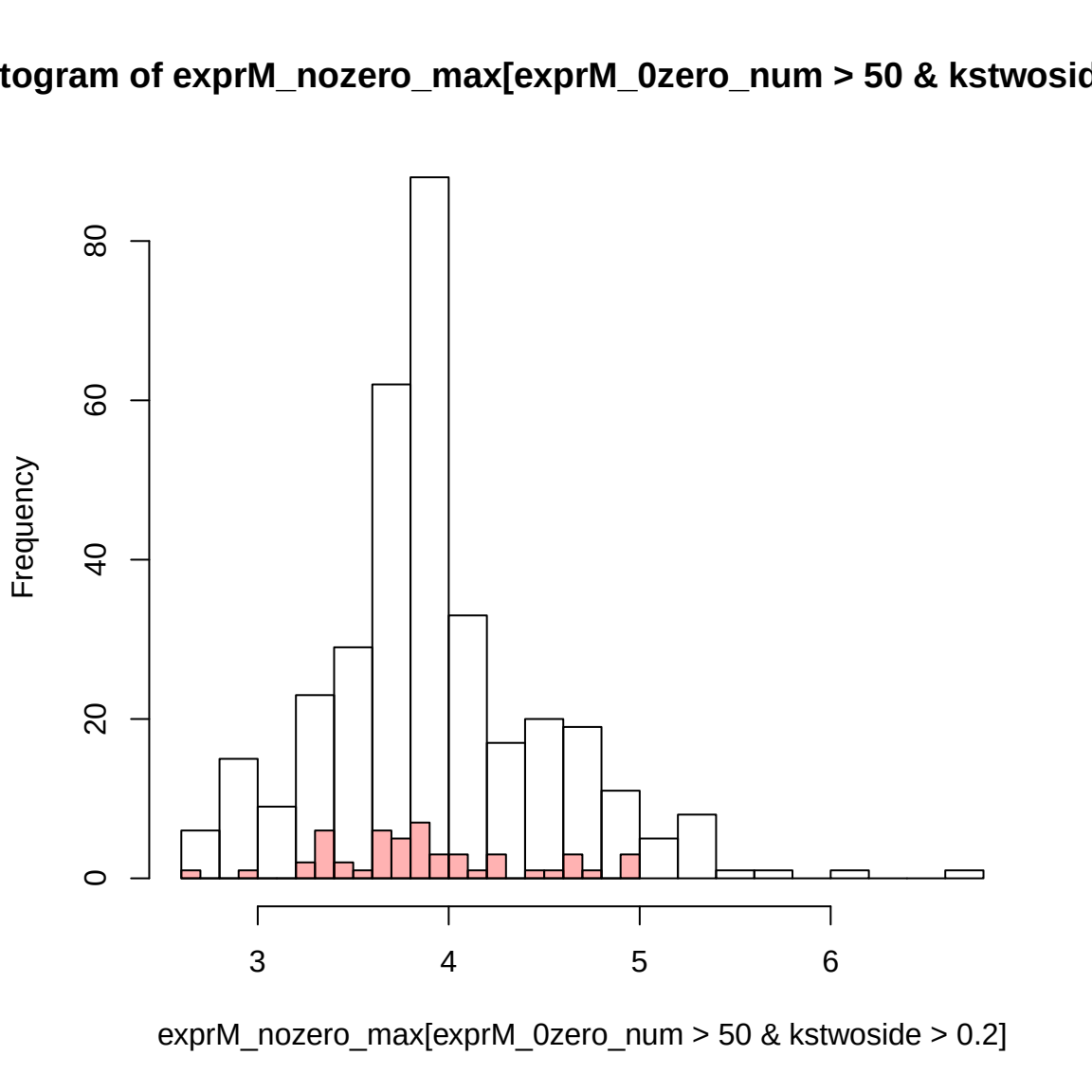

KSless nonsig: individual expression cell count of gene#47
Frequency
0
2
4
6
8
2
4
6
8
10
table(meta$individual[non_zero_flag])

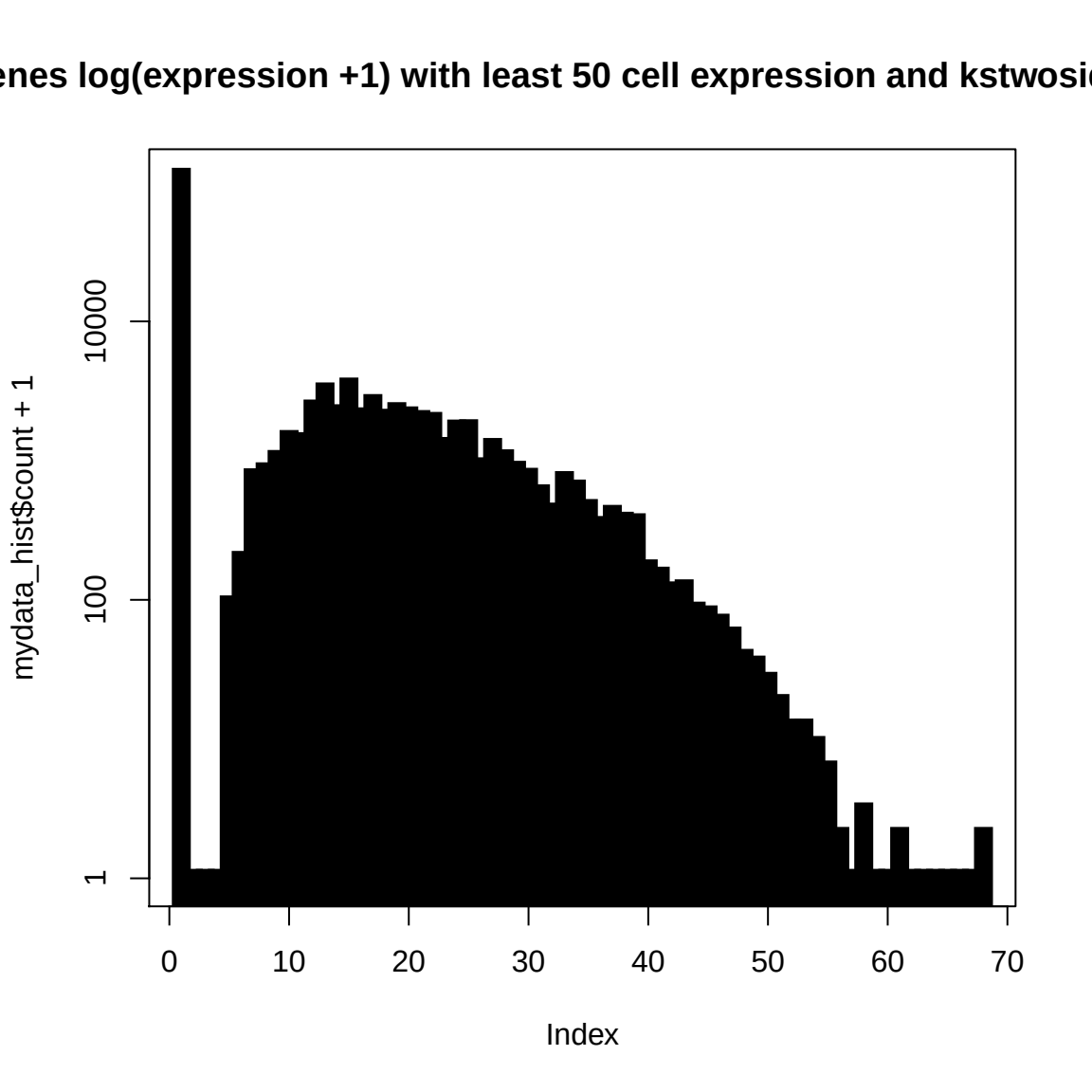

togram of exprM_nozero_mean[exprM_0zero_num > 50 & kstwosi
Frequency
0
20
40
60
80
1.5
2.0
2.5
3.0
3.5
exprM_nozero_mean[exprM_0zero_num > 50 & kstwoside > 0.2]

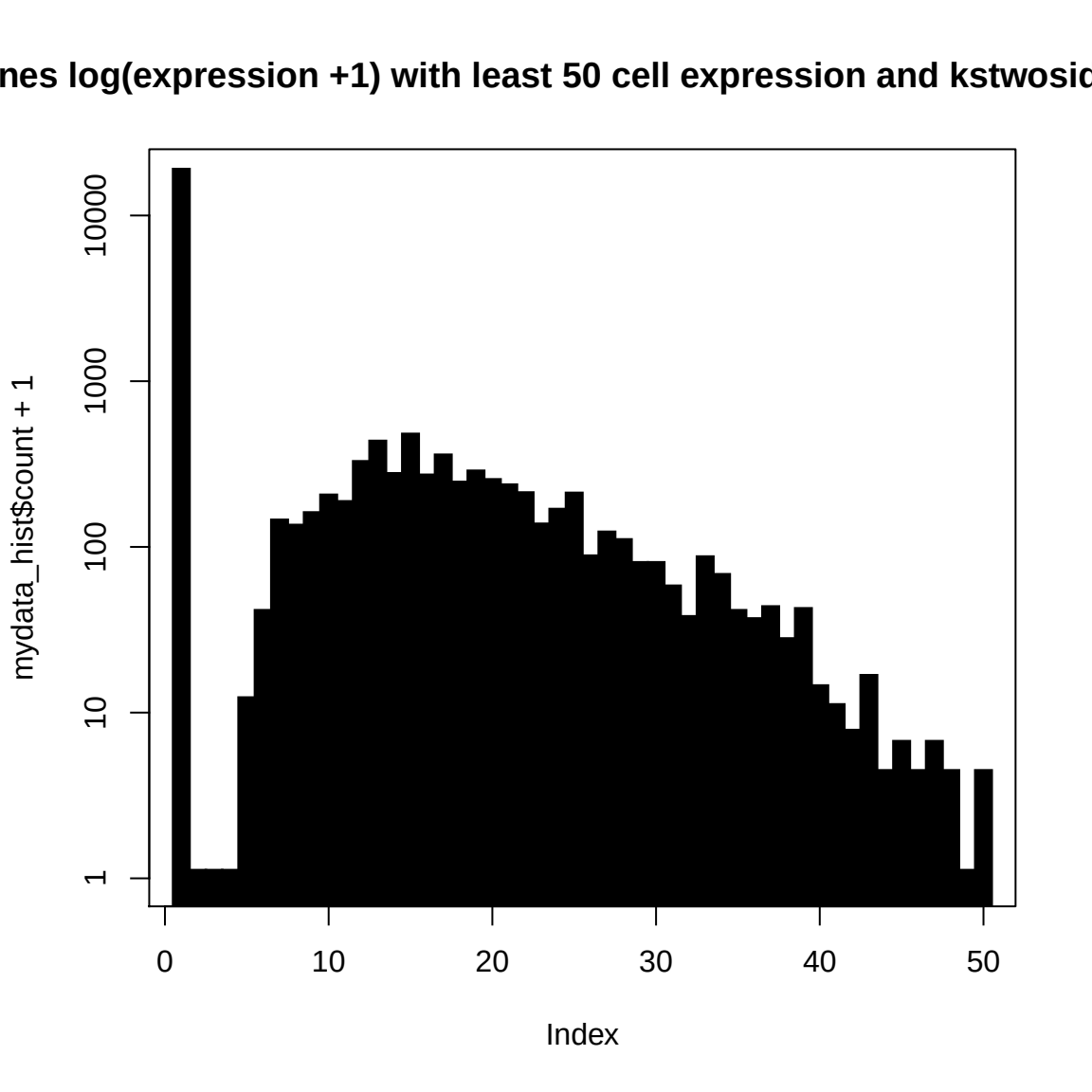

ogram of exprM_nozero_median[exprM_0zero_num > 50 & kstwos
Frequency
0
20
40
60
80
100
1.5
2.0
2.5
3.0
3.5
exprM_nozero_median[exprM_0zero_num > 50 & kstwoside > 0.2]

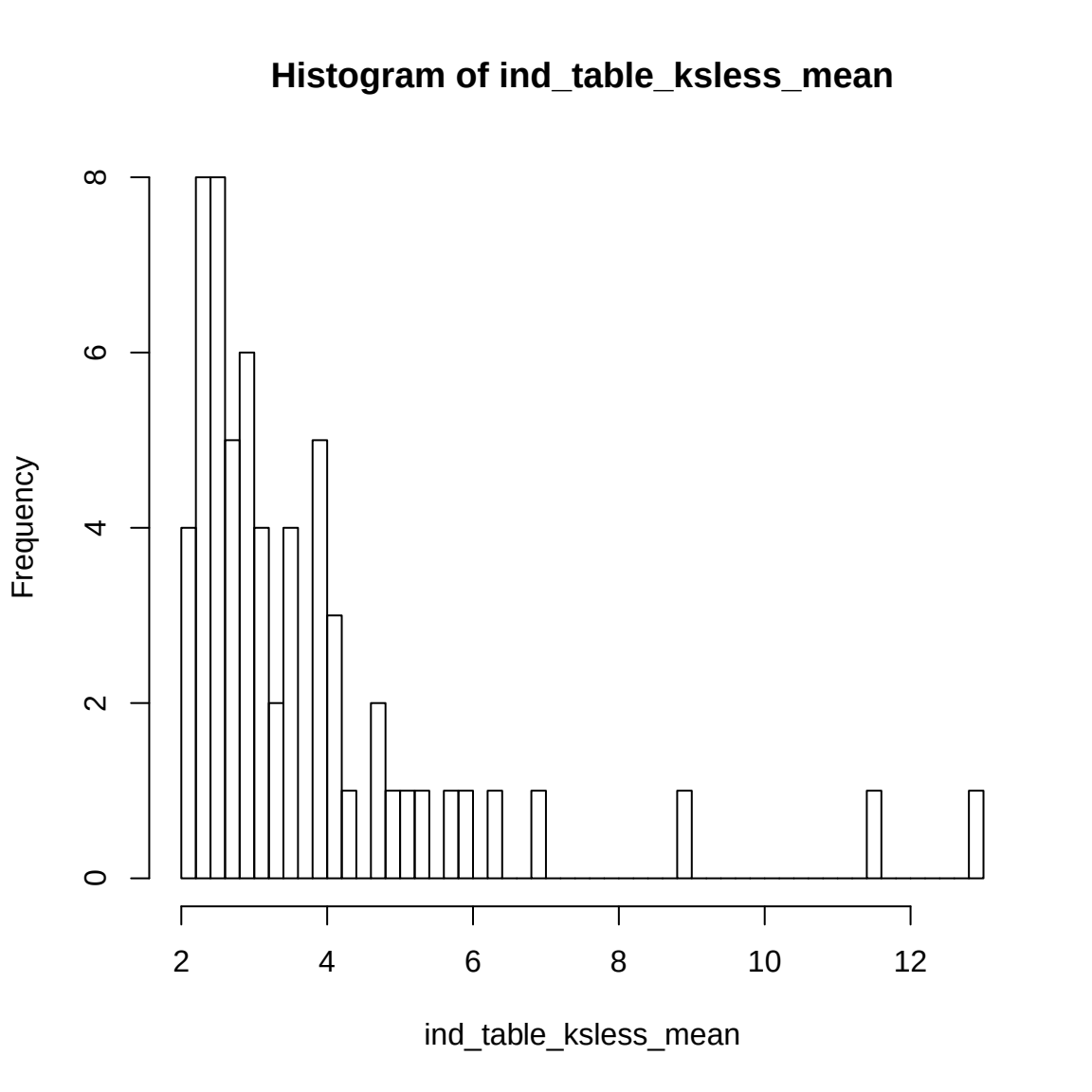

stogram of exprM_nozero_sd[exprM_0zero_num > 50 & kstwoside
Frequency
0
10
20
30
40
50
0.5
0.6
0.7
0.8
0.9
exprM_nozero_sd[exprM_0zero_num > 50 & kstwoside > 0.2]

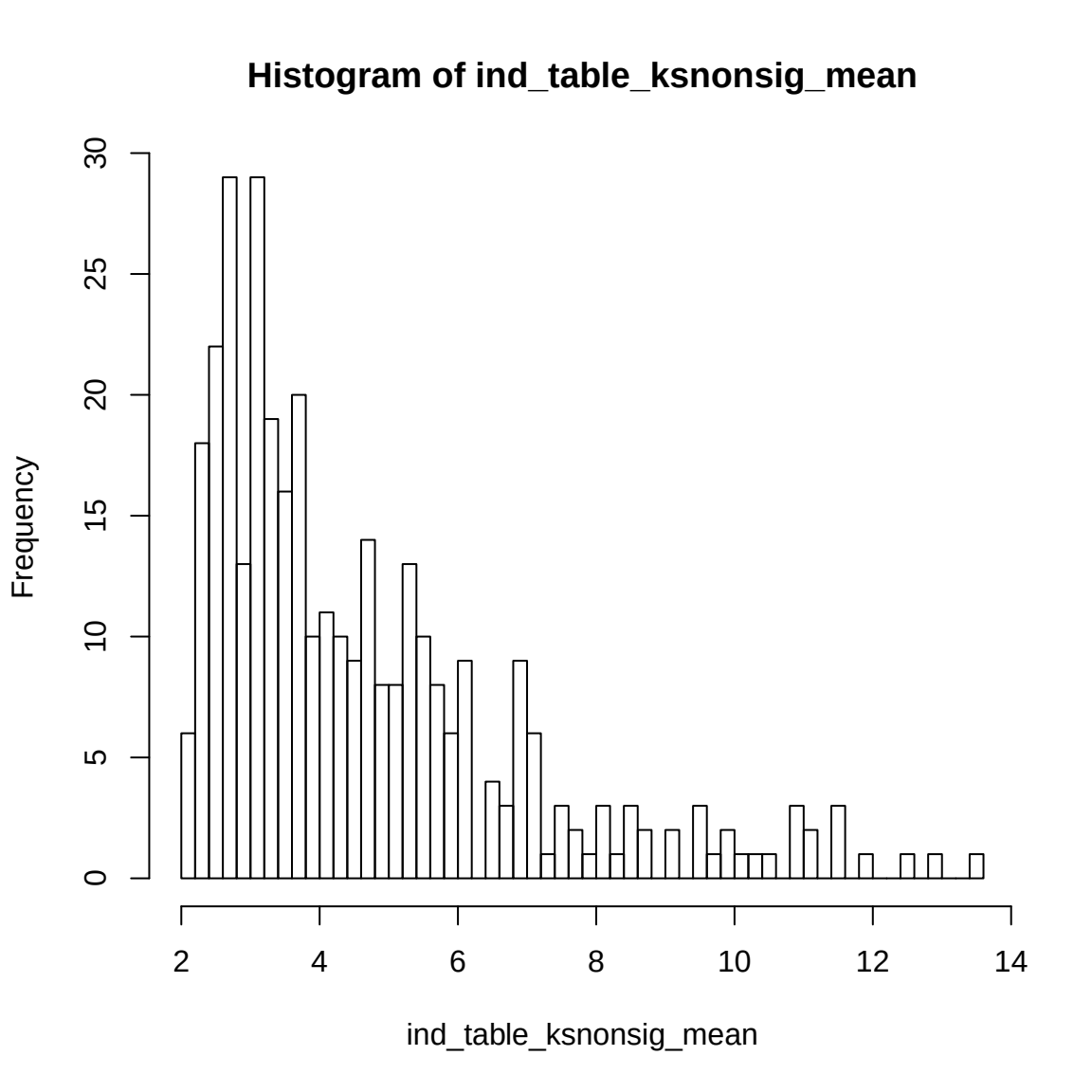

gram of exprM_nozero_skewness[exprM_0zero_num > 50 & kstwo
Frequency
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
exprM_nozero_skewness[exprM_0zero_num > 50 & kstwoside > 0.2]

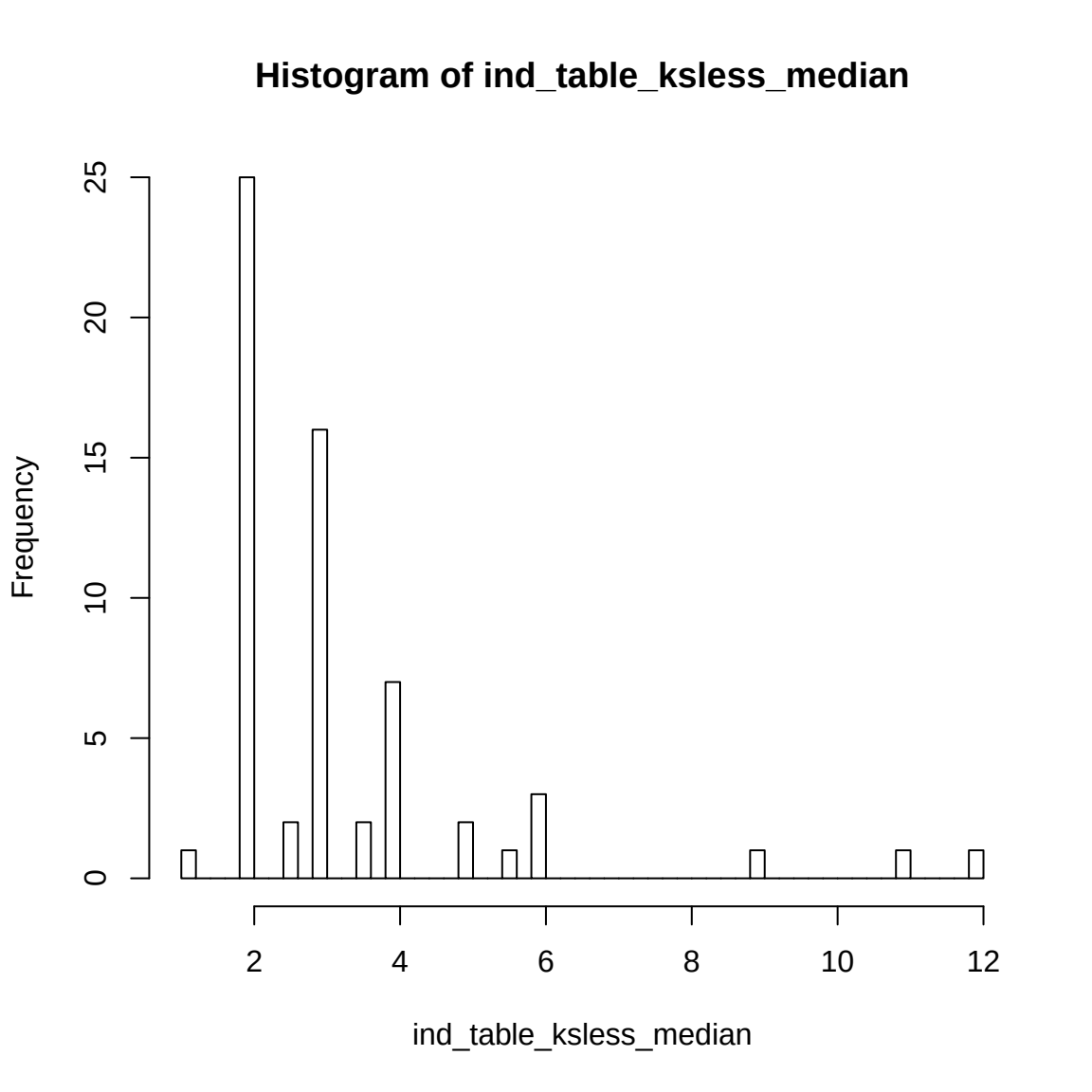

togram of exprM_nozero_max[exprM_0zero_num > 50 & kstwosid
Frequency
0
20
40
60
80
3
4
5
6
exprM_nozero_max[exprM_0zero_num > 50 & kstwoside > 0.2]

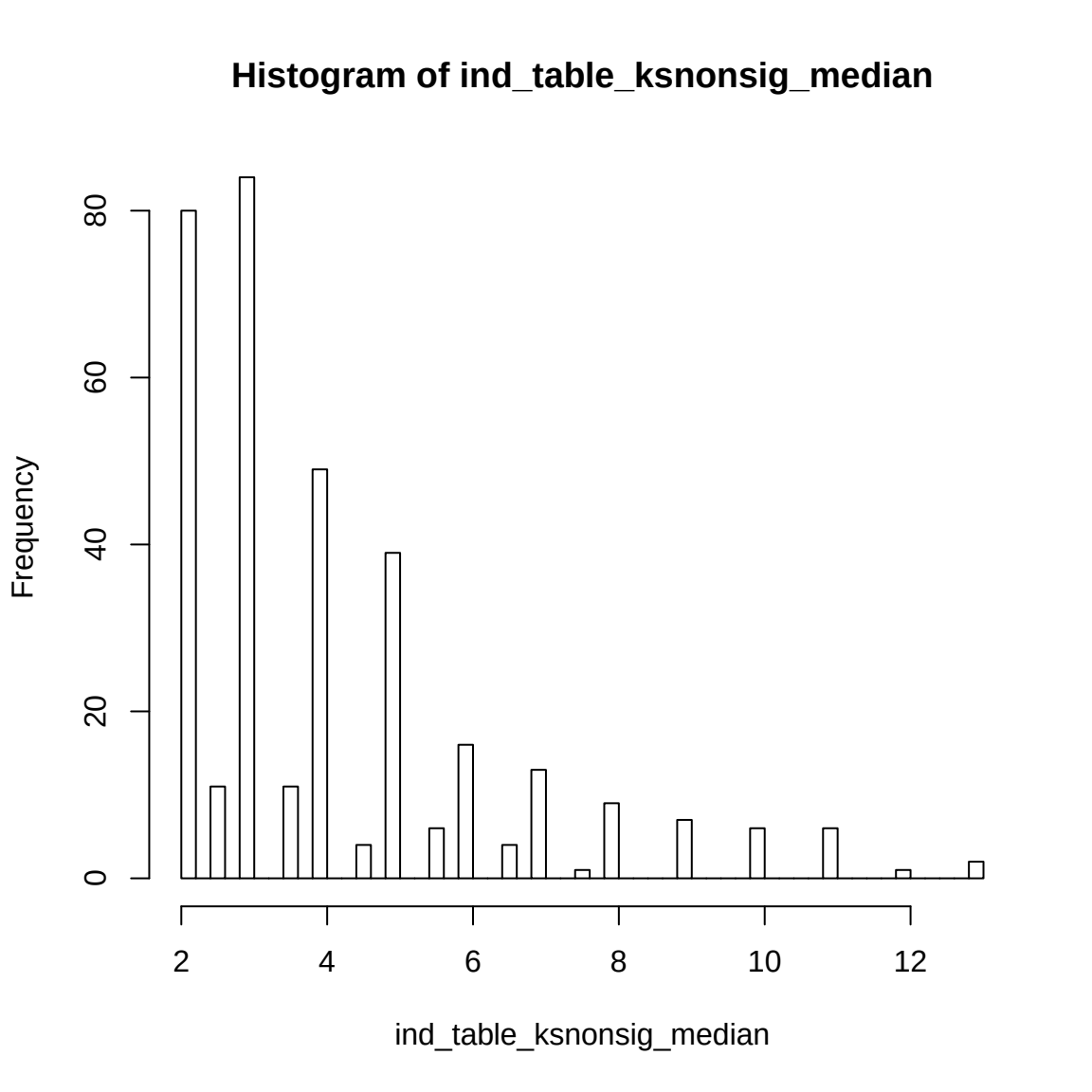

enes log(expression +1) with least 50 cell expression and kstwosi
mydata_hist$count + 1
1
100
10000
0
10
20
30
40
50
60
70
Index

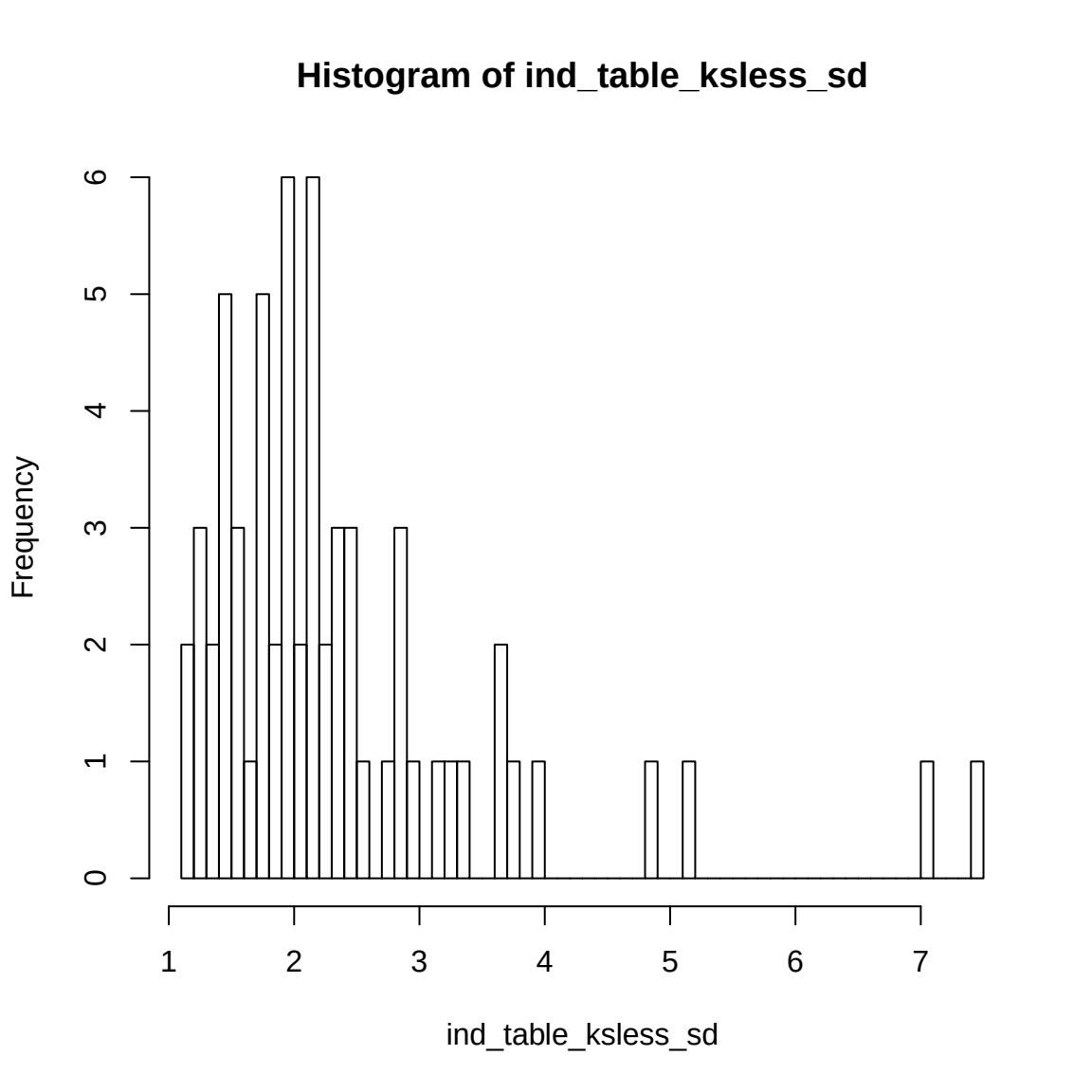

nes log(expression +1) with least 50 cell expression and kstwosic
mydata_hist$count + 1
1
10
100
1000
10000
0
10
20
30
40
50
Index

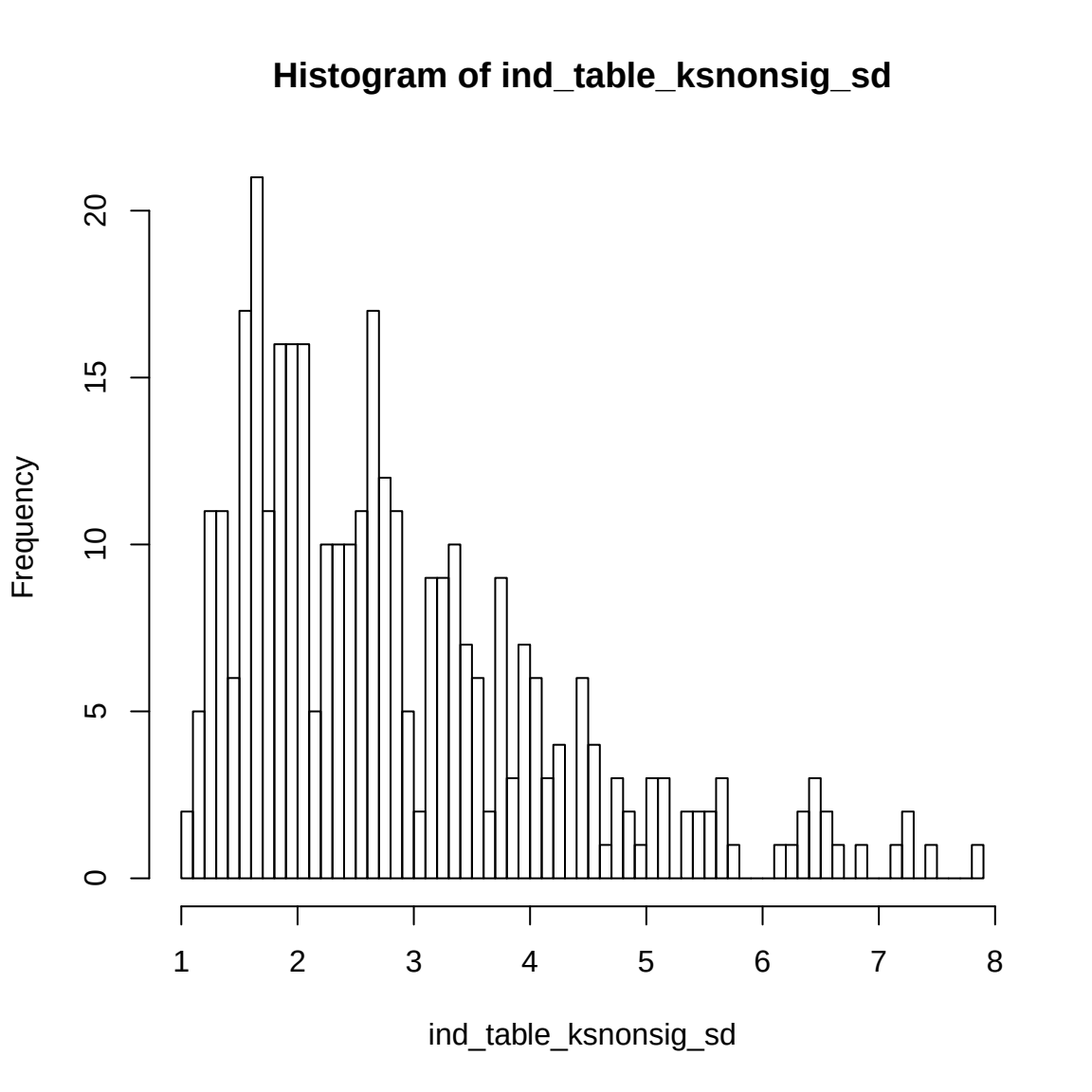

Histogram of ind_table_ksless_mean
Frequency
0
2
4
6
8
2
4
6
8
10
12
ind_table_ksless_mean

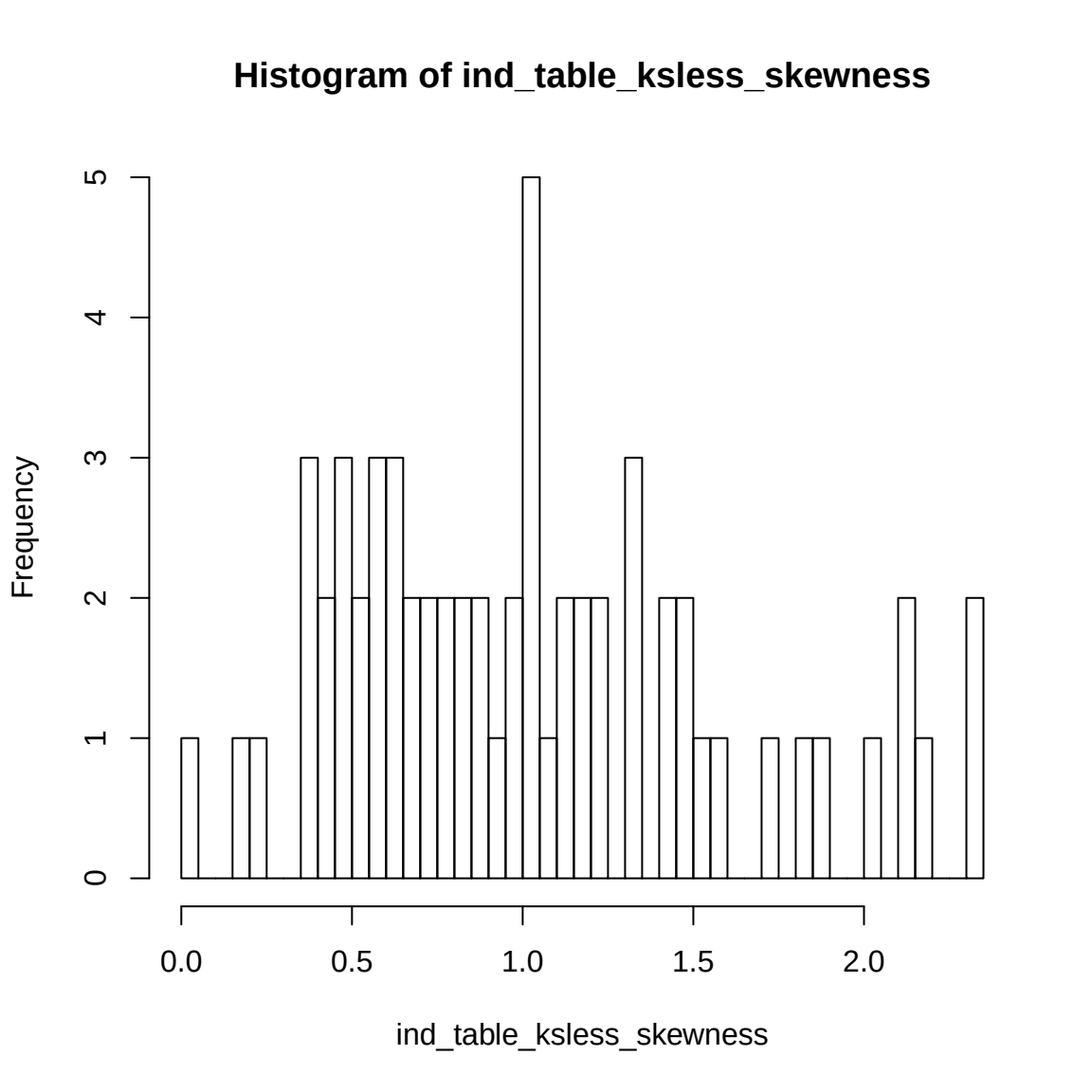

Histogram of ind_table_ksnonsig_mean
Frequency
0
5
10
15
20
25
30
2
4
6
8
10
12
14
ind_table_ksnonsig_mean

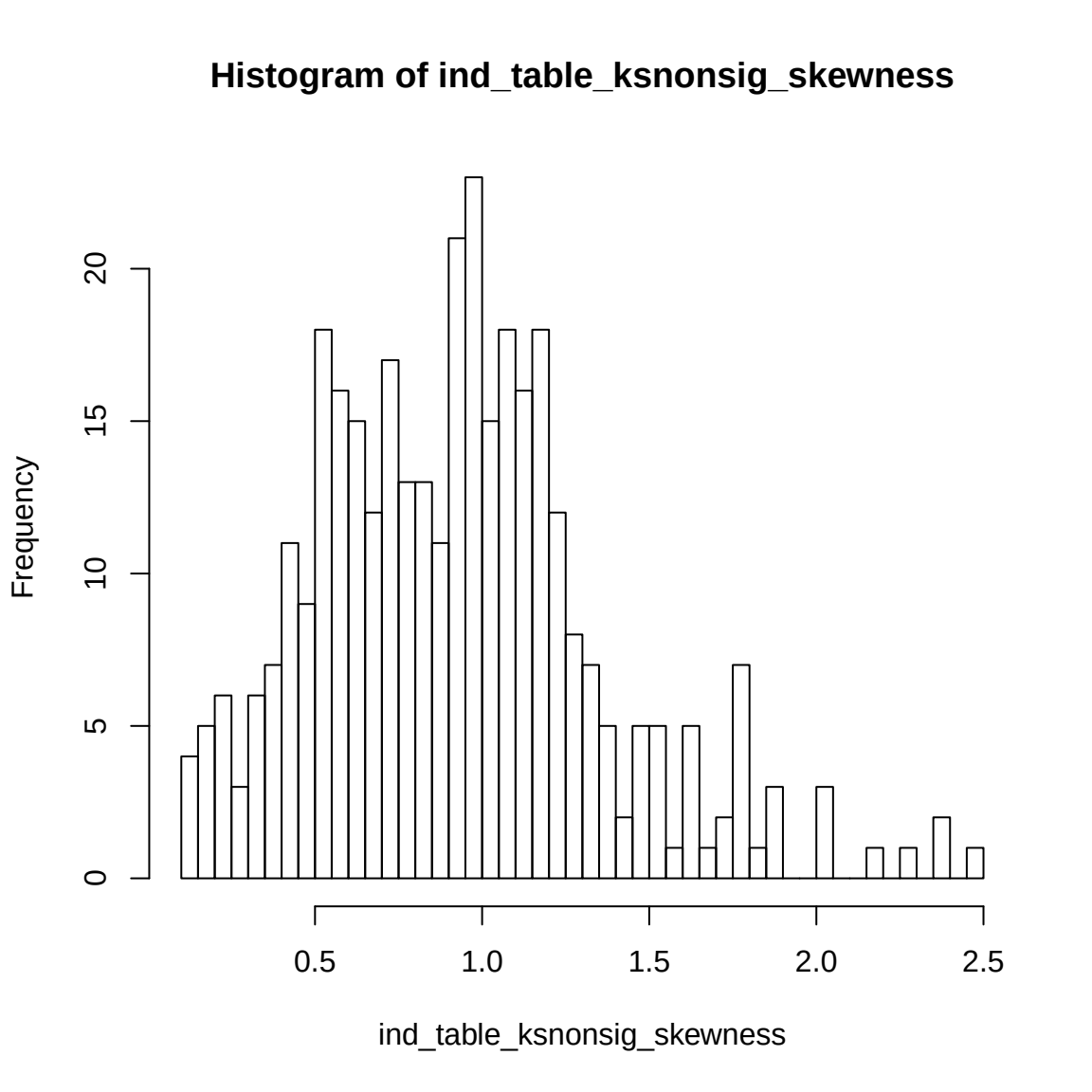

Histogram of ind_table_ksless_median
Frequency
0
5
10
15
20
25
2
4
6
8
10
12
ind_table_ksless_median

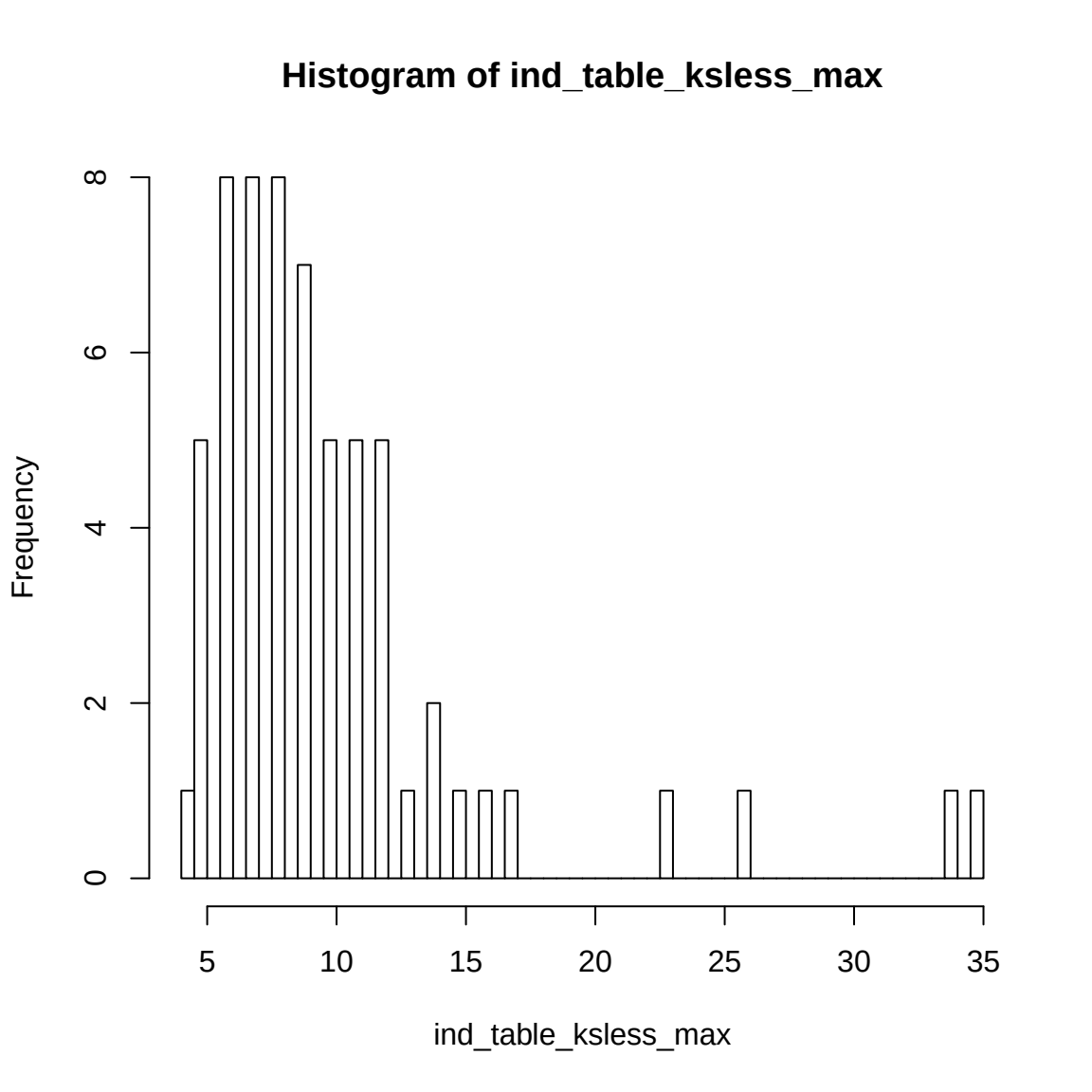

Histogram of ind_table_ksnonsig_median
Frequency
0
20
40
60
80
2
4
6
8
10
12
ind_table_ksnonsig_median

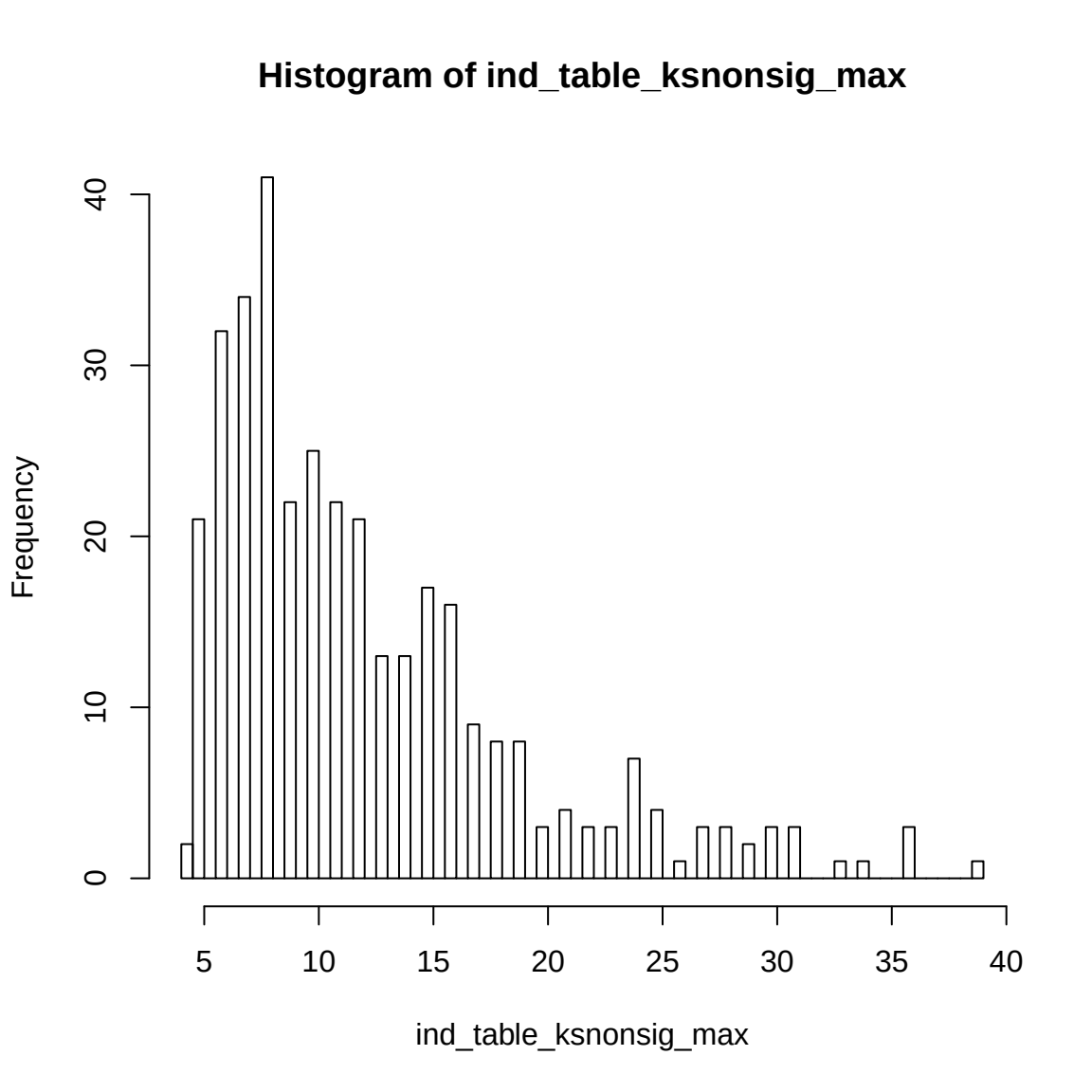

Histogram of ind_table_ksless_sd
Frequency
0
1
2
3
4
5
6
1
2
3
4
5
6
7
ind_table_ksless_sd


Histogram of ind_table_ksnonsig_sd
Frequency
0
5
10
15
20
1
2
3
4
5
6
7
8
ind_table_ksnonsig_sd


Histogram of ind_table_ksless_skewness
Frequency
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
ind_table_ksless_skewness


Histogram of ind_table_ksnonsig_skewness
Frequency
0
5
10
15
20
0.5
1.0
1.5
2.0
2.5
ind_table_ksnonsig_skewness


Histogram of ind_table_ksless_max
Frequency
0
2
4
6
8
5
10
15
20
25
30
35
ind_table_ksless_max


Histogram of ind_table_ksnonsig_max
Frequency
0
10
20
30
40
5
10
15
20
25
30
35
40
ind_table_ksnonsig_max