FIGURE 1

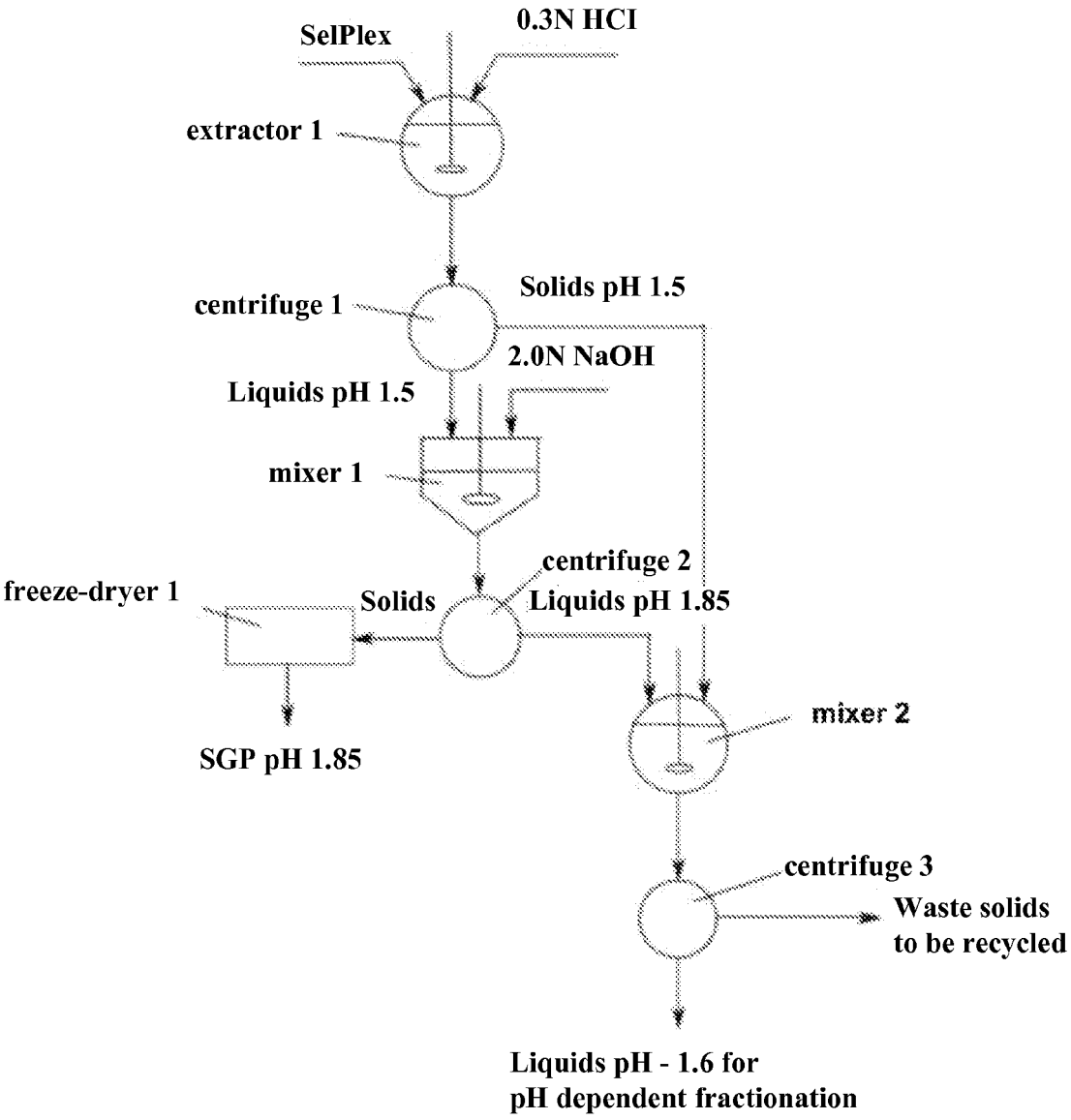

SelPlex
0.3N HCl
extractor 1
centrifuge 1
Solids pH 1.5
2.0N NaOH
Liquids pH 1.5
mixer 1
centrifuge 2
freeze-dryer 1
Solids
Liquids pH 1.85
mixer 2
SGP pH 1.85
centrifuge 3
Waste solids
to be recycled
Liquids pH - 1.6 for
pH dependent fractionation

FIGURE 2

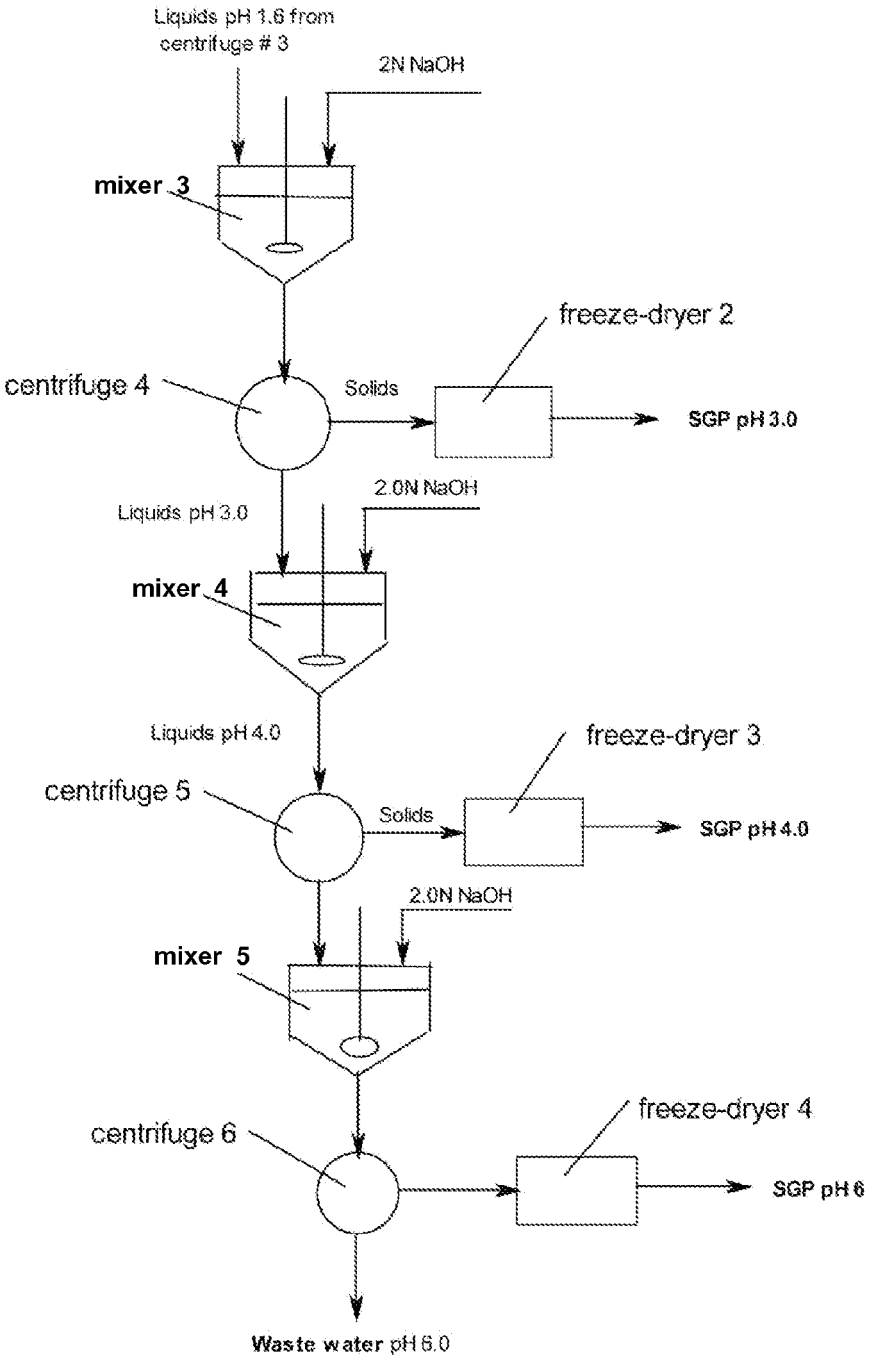
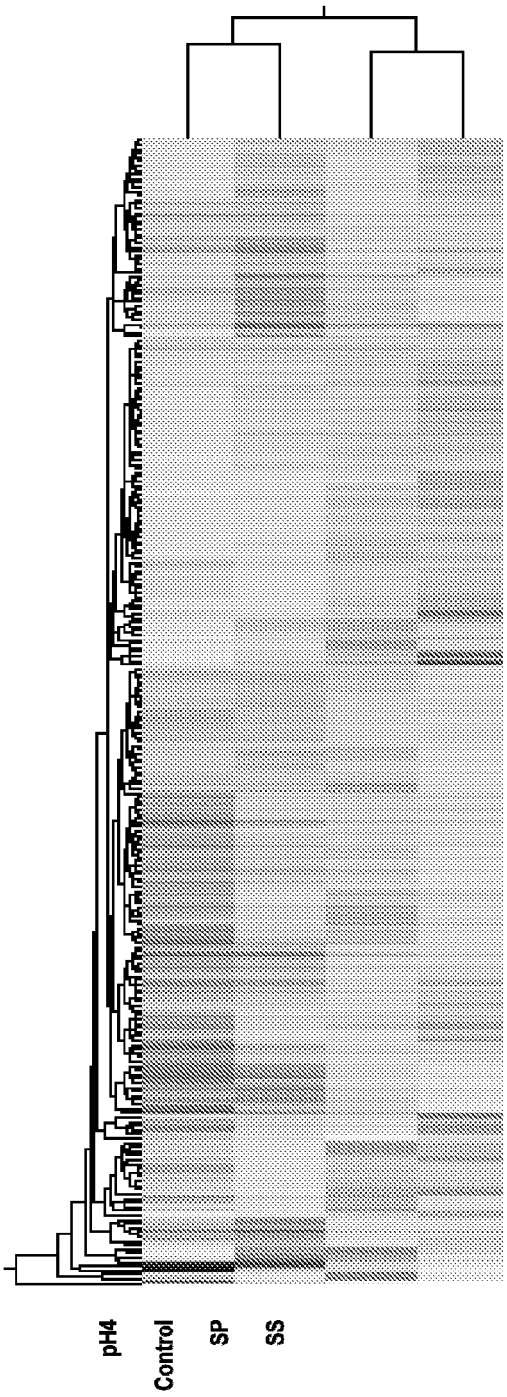

Liquids pH 1.6 from centrifuge # 3
2N NaOH
mixer 3
freeze-dryer 2
centrifuge 4
Solids
SGP pH 3.0
Liquids pH 3.0
2.0N NaOH
mixer 4
Liquids pH 4.0
freeze-dryer 3
centrifuge 5
Solids
SGP pH 4.0
2.0N NaOH
mixer 5
freeze-dryer 4
centrifuge 6
SGP pH 6
Waste water pH 6.0

FIGURE 3



*White=down-regulated, Gray=no change, Black= up-regulated in relative gene expression.

FIGURE 4

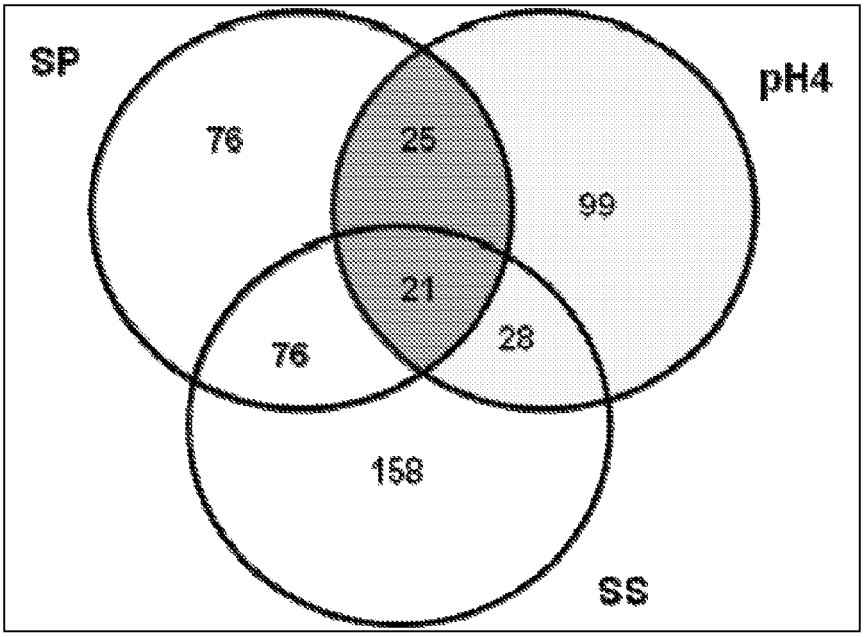
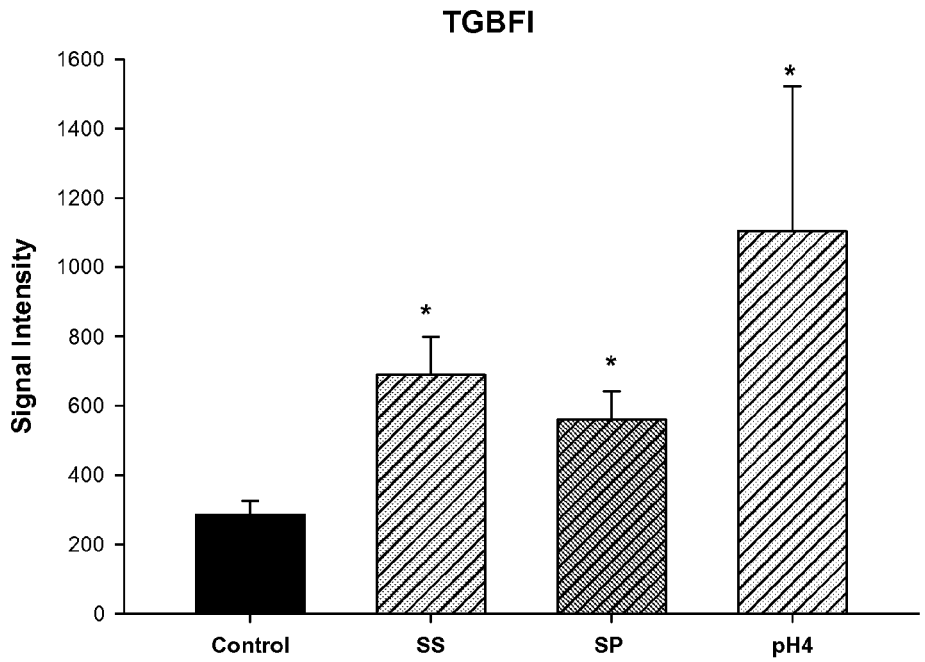
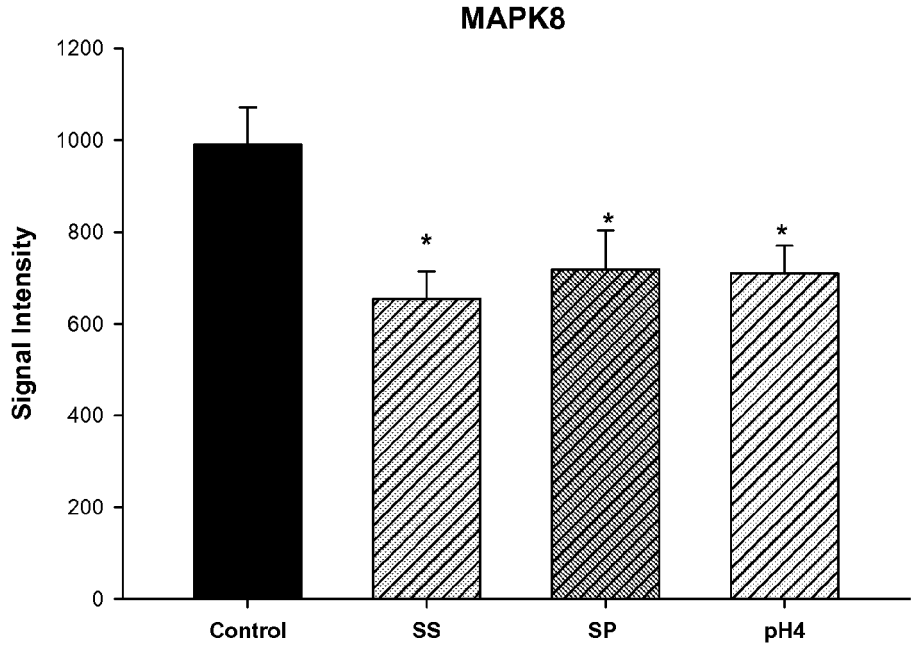


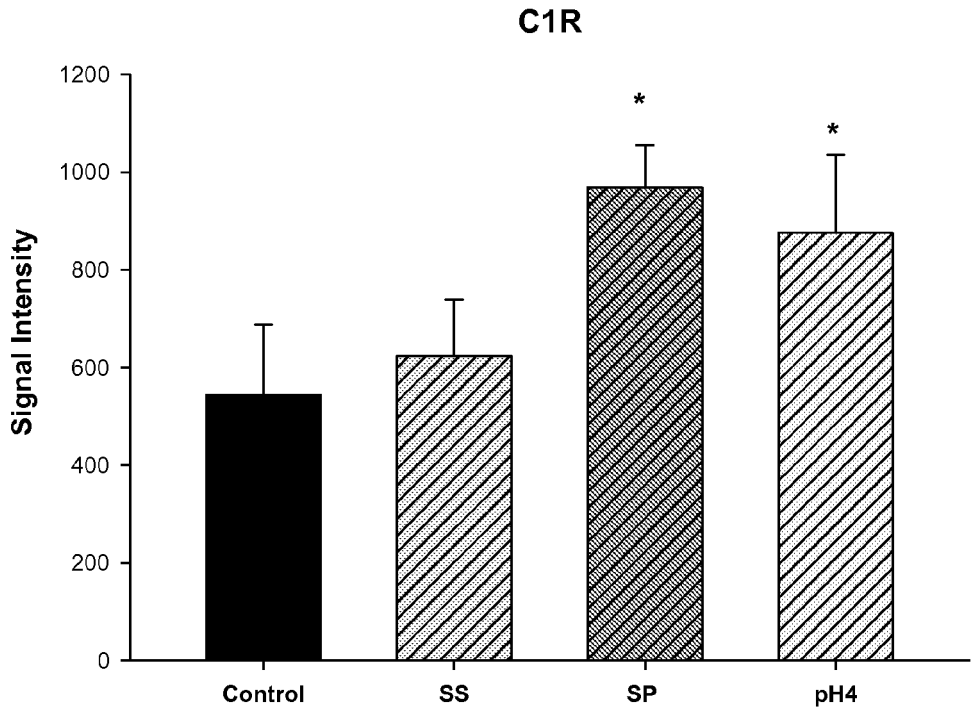
FIGURE 5

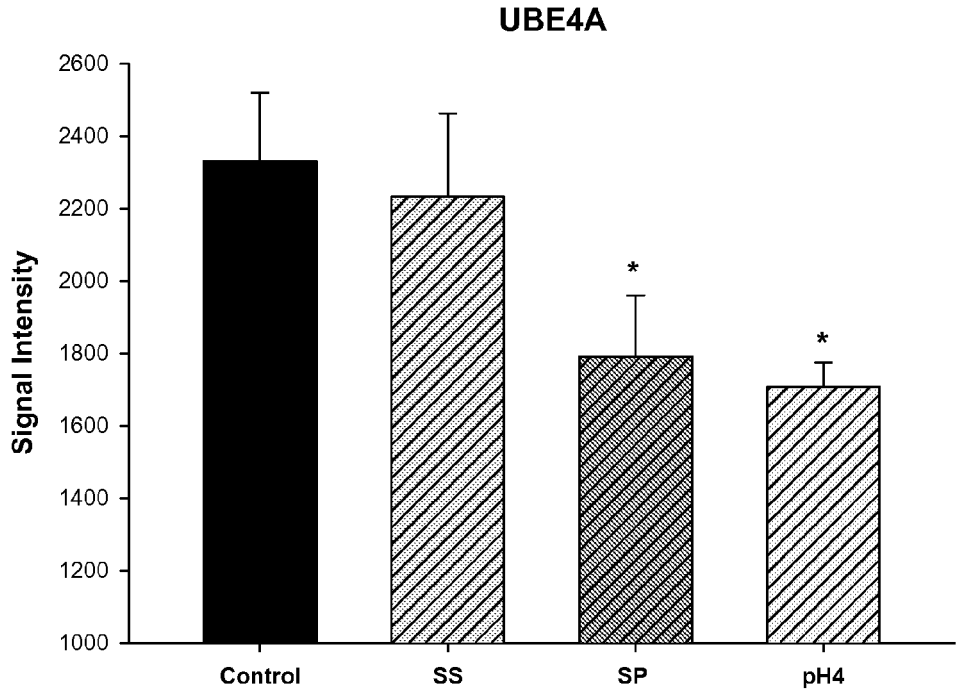




* $p < 0.05$

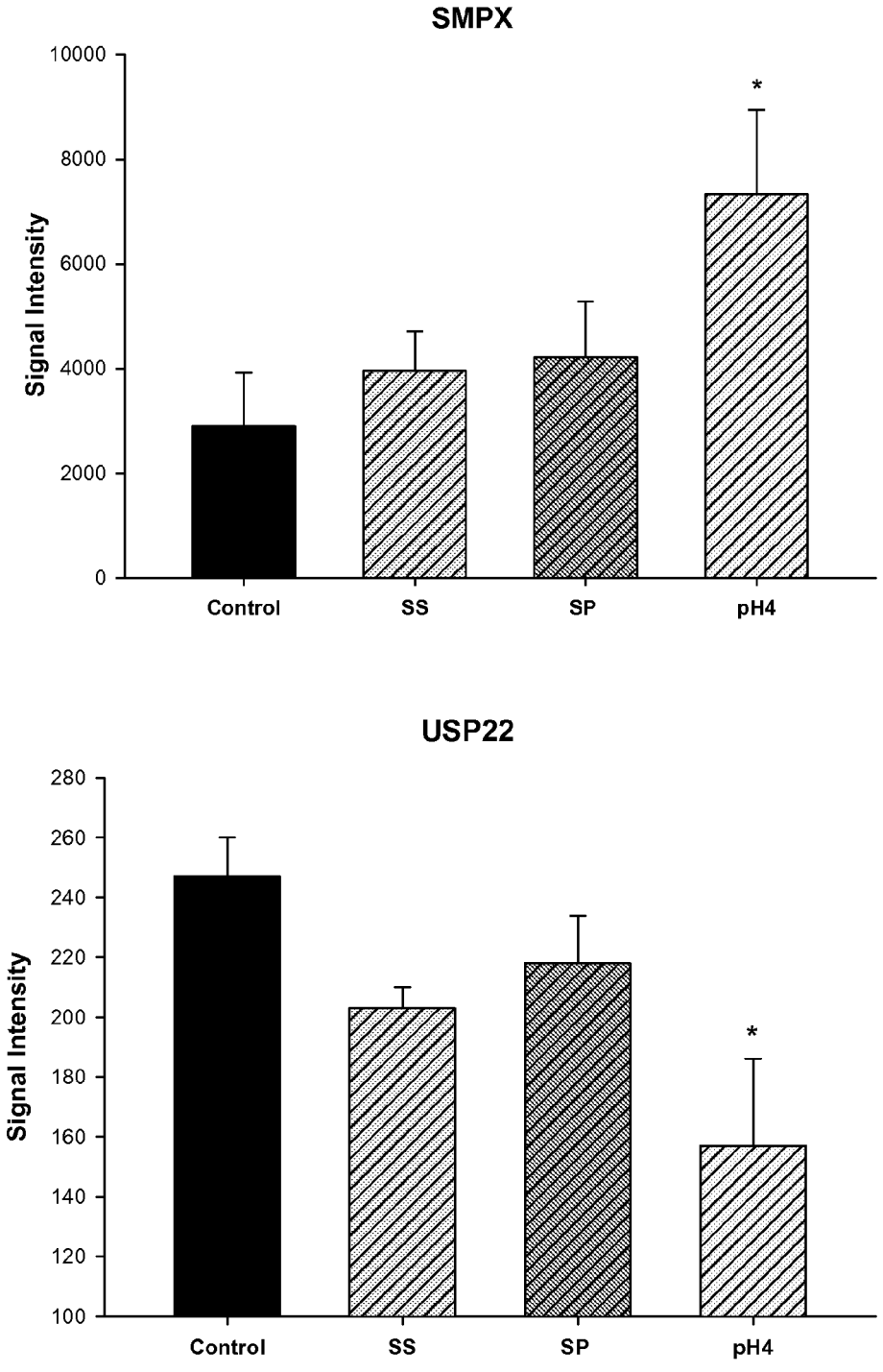
FIGURE 6





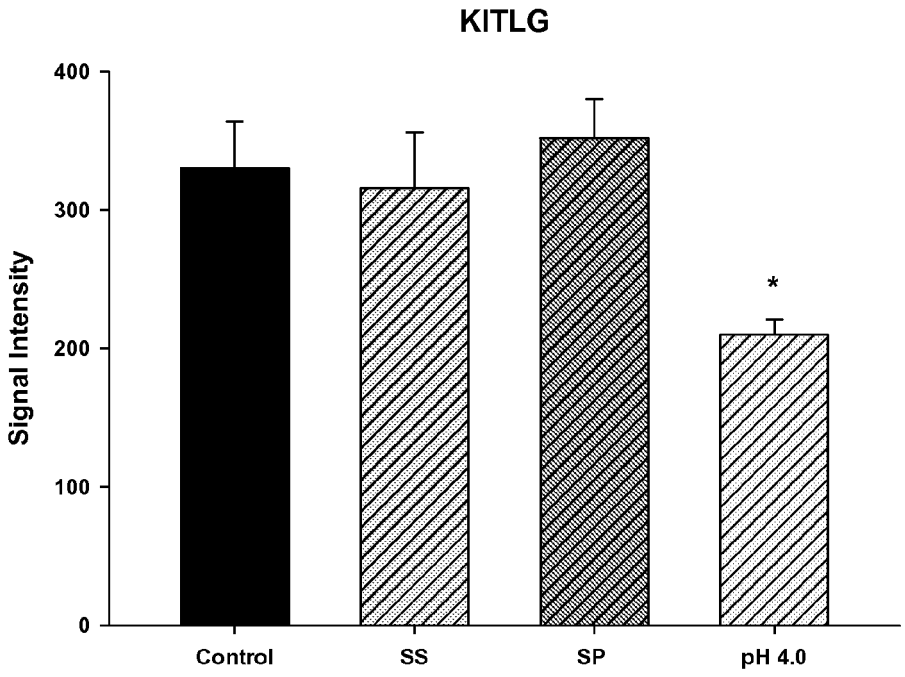
* $p < 0.05$

FIGURE 7



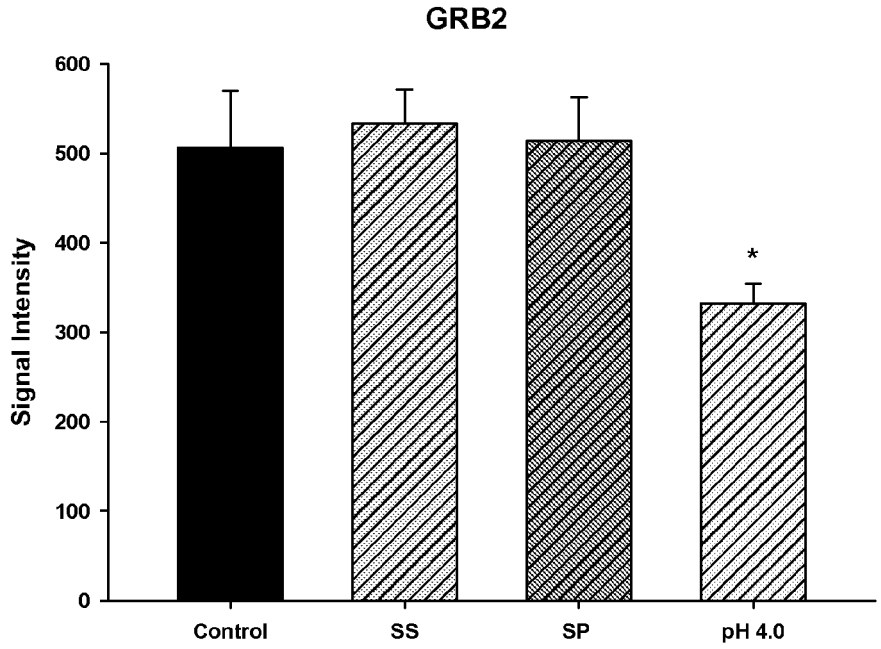
* $p < 0.05$

FIGURE 8



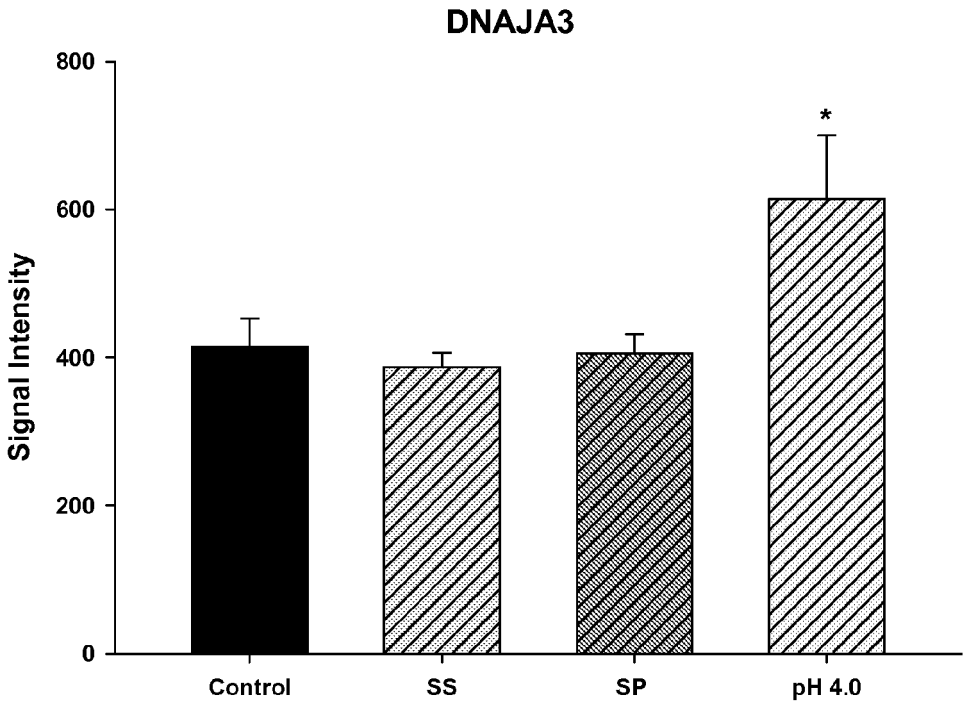
* $p<0.05$

FIGURE 9



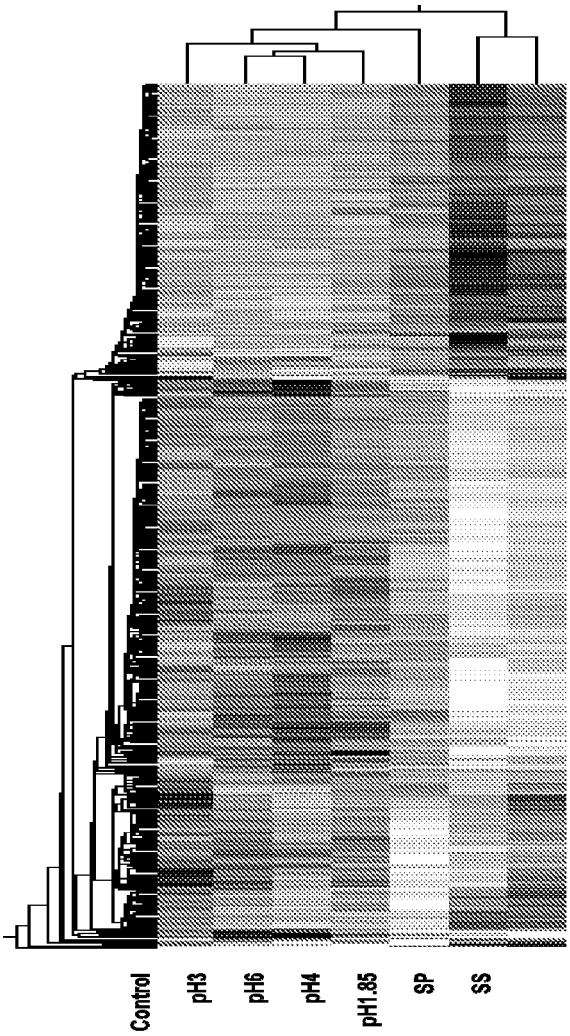
*p<0.05

FIGURE 10



*p<0.05

FIGURE 11



*White=down-regulated, Gray=no change, Black= up-regulated in relative gene expression.

FIGURE 12

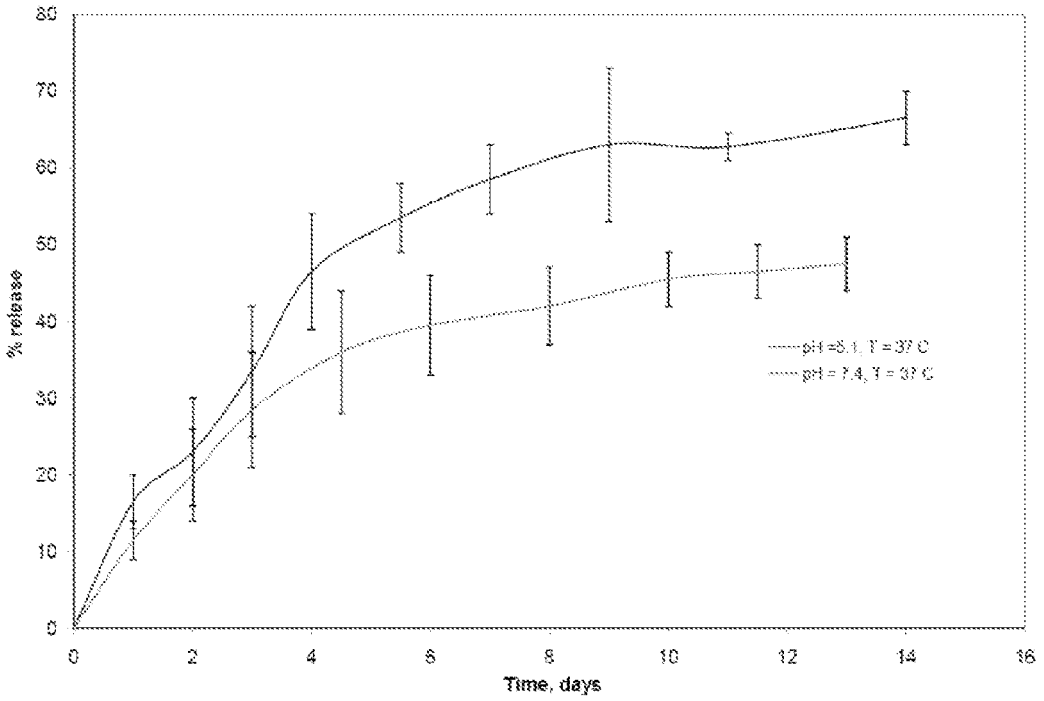

% release
Time, days
0
2
4
6
8
10
12
14
16
0
10
20
30
40
50
60
70
80
pH = 5.1, T = 37 C
pH = 7.4, T = 37 C

FIGURE 13

