DMSO_3
DMSO_1
DMSO_2
BaP_3
BaP_1
BaP_2
2
1
0
-1
-2.5
0.0
2.5
PC3: 14.8% variance
PC1: 39.2% variance

Fig. S1

A
FunRich
miRDIP
argetScan
miWALK
340
144
111
70
600
117
368
667
7948
313
42
556
186
136
812
B
Biological Process
negative regulation of intrinsic apoptotic signaling pathway to DNA damage
regulation of cellular senescence
homophilic cell adhesion via plasma membrane adhesion molecules
response to leukemia inhibitory factor
positive regulation of protein kinase B signaling
Cellular Component
P-body
serine/threonine protein kinase complex
protein kinase complex
RNA polymerase II transcription factor complex
nuclear transcription factor complex
Molecular Function
phosphatidylinositol-4,5-bisphosphate 3-kinase activity
phosphatidylinositol bisphosphate kinase activity
phosphatidylinositol 3-kinase activity
RNA polymerase II regulatory region DNA binding
binding
0
2
4
6
8
Enrichment Ratio
C
MAPK signaling pathway
Pathways in cancer
Autophagy
Regulation of actin cytoskeleton
PI3K-Akt signaling pathway
0
5×10-4
1×10-3
1.5×10-3
p-value

Fig. S2

A
DMSO
B[a]P 10 nM
B[a]P 2 µM
AO+
%P:10,95
AO-
%P:84,07
P3
%P:4,99
AO+
%P:11,84
AO-
%P:83,63
P3
%P:4,57
AO+
%P:8,65
AO-
%P:86,28
P3
%P:5,08
Red fluorescence
Green fluorescence
Red to Green fluorescence intensity ratio
B
Acridine orange-positive cells (%)
DMSO
B[a]P 10 nM
B[a]P 2 µM
C
mRNA expression (relative)
DMSO
2µM B[a]P
ATG5
ATG7
ATG12
BECN1
D
Protein expression (relative)
DMSO
2µM B[a]P
LC3II
DMSO
B[a]P
LC3 I
LC3II
HSC70

Fig. S3

A
DCFDA
(mean fluorescence intensity)
15000
10000
5000
0
*
DMSO
B[a]P 10 nM
B|a]P 2 µM
PMA 10 ng/ml
counts
285
214
142
71
0
10 3
10 4
10 5
fluorescence
DMSO
2 µM B[a]P
10 ng/ml PMA
B
mRNA expression (relative)
1.5
1.0
0.5
0.0
DMSO
2µM B[a]P
*
*
SOD1
SOD2
NRF2
HMOX1
C
Protein expression (relative)
1.5
1.0
0.5
0.0
DMSO
2µM B[a]P
*
HO-1
DMSO
B[a]P
HO-1
HSC70

Fig. S4

A

B[a]P anti-miR-CTR
B[a]P anti-miR-132
miRNA expression (relative)
4
3
2
1
0
n.d.
miR-132
miR-150

B

B[a]P anti-miR-CTR
B[a]P anti-miR-132
mRNA expression (relative)
1.5
1.0
0.5
0.0
SOD2
HMOX1

Fig. S5