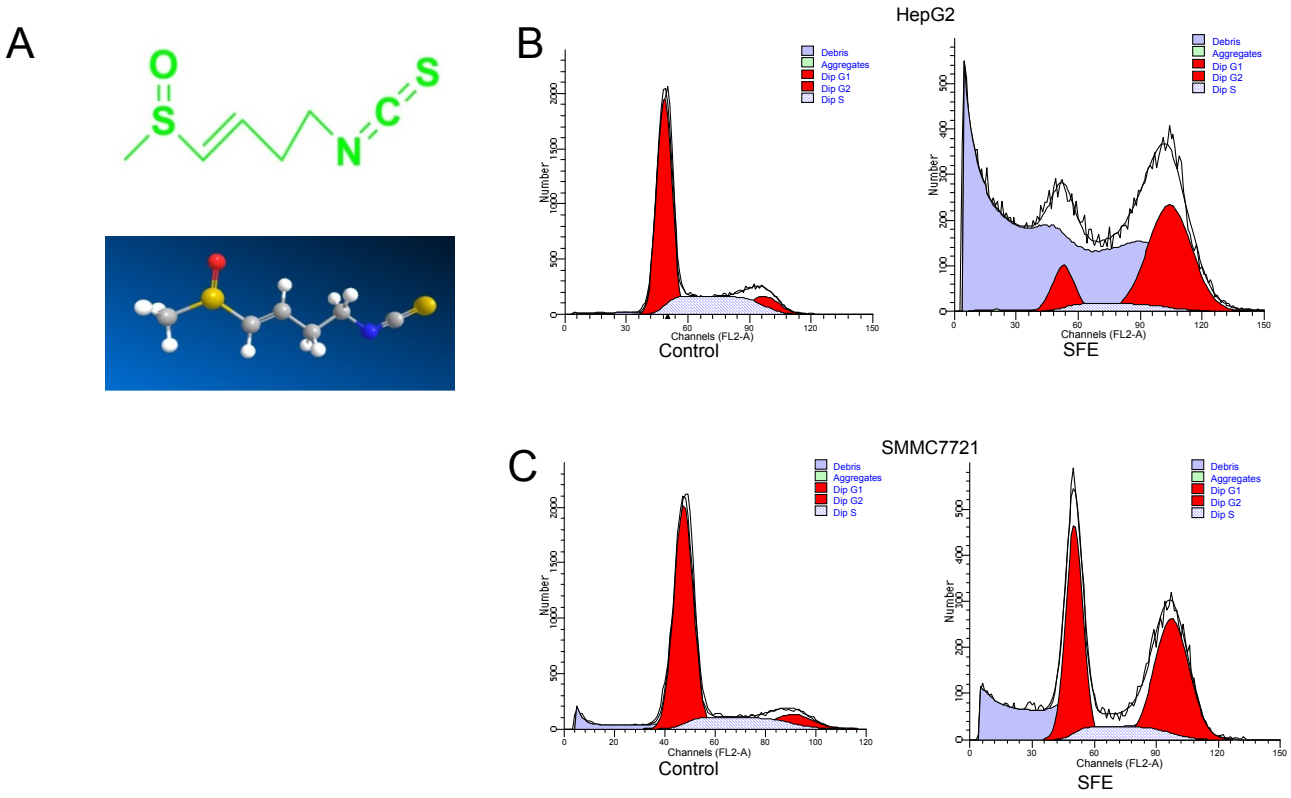
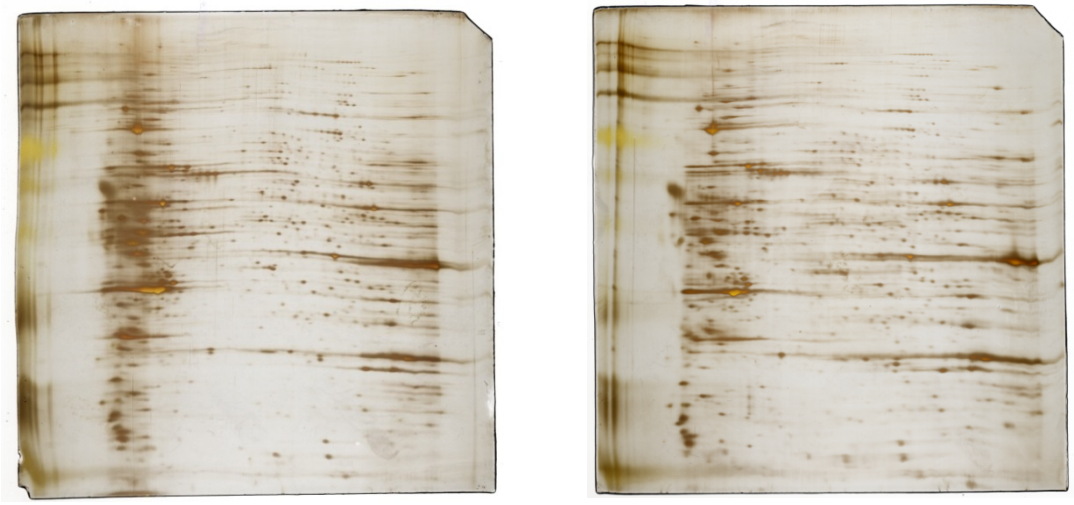
Supplementary fig. 1



SFE inhibit tumor cell proliferation through blocking cell cycle. (A) Chemical structure of sulforaphene (SFE). Molecular weight = 175. (B and C) HepG2 and SMMC7721 cells were untreated or treated with SFE (30μM) for 48 h and then collected for flow cytometry. SFE inhibit tumor cell proliferation through blocking cell cycle.

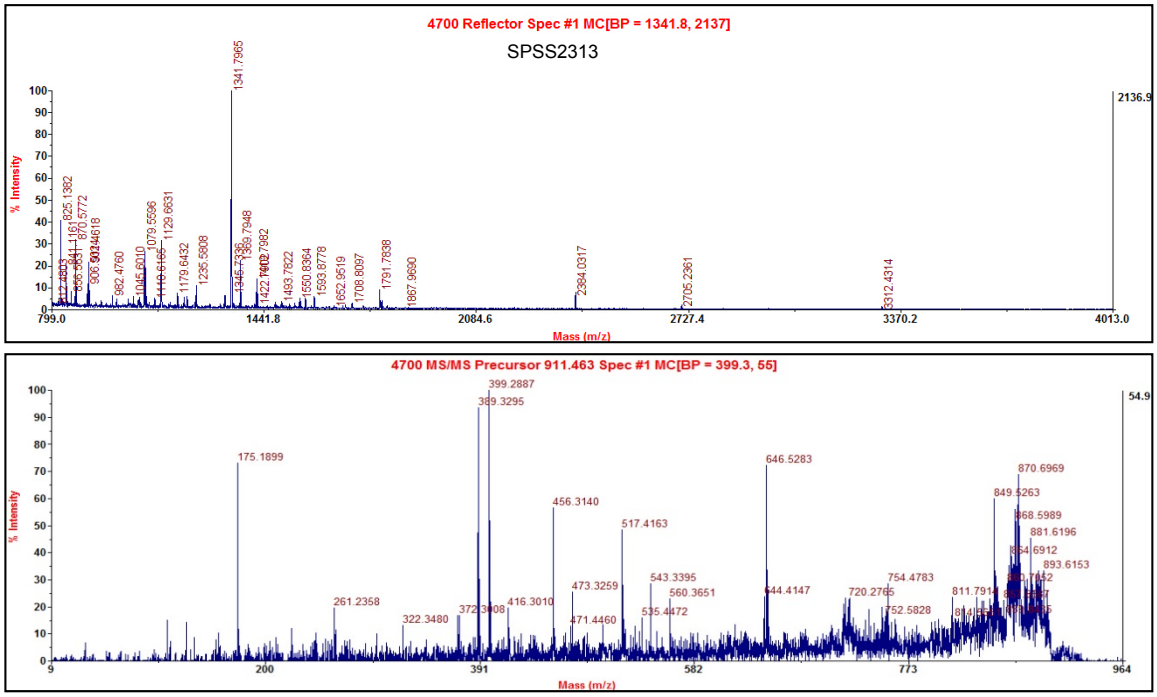
Supplementary fig. 2

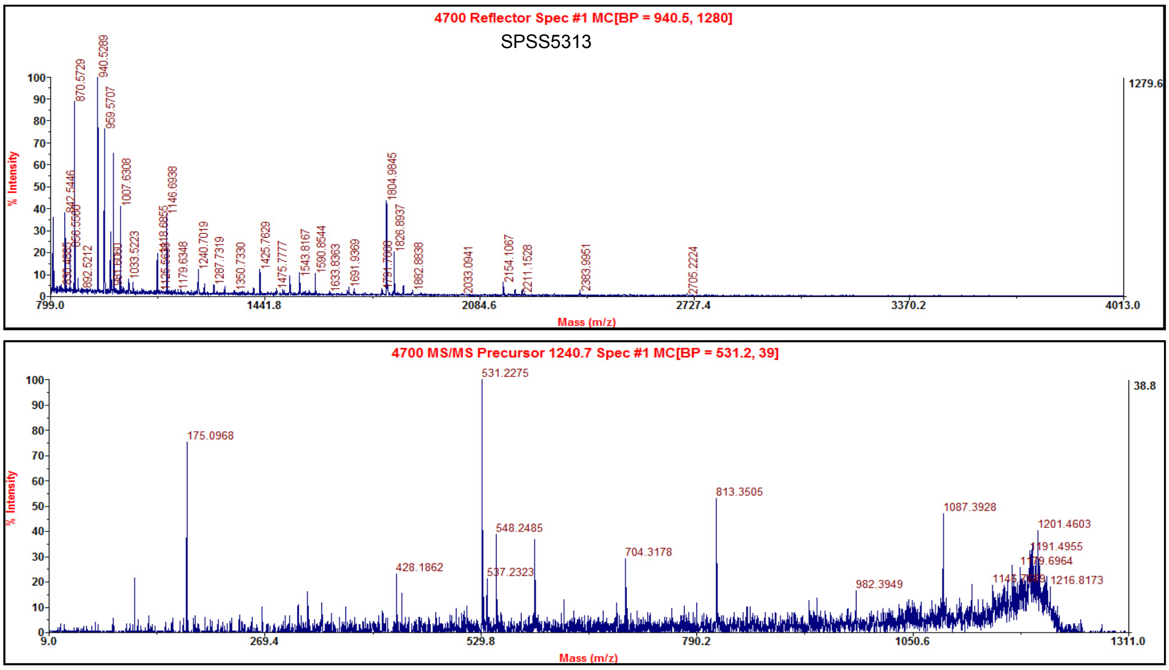
A

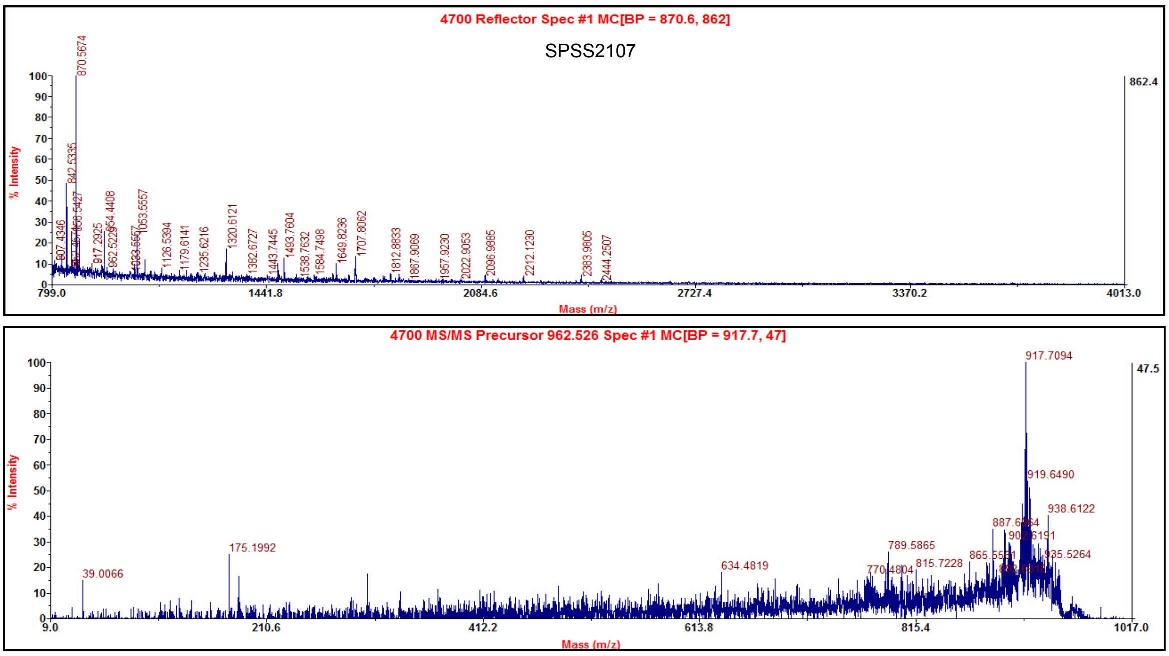


Control SFE

B




4700 Reflector Spec #1 MC[BP = 940.5, 1280]
SPSS5313
% Intensity
Mass (m/z)
1279.6
870.5729
940.5289
959.5707
842.5446
1007.6308
1146.6938
1804.9845
1826.8937
892.5212
1033.5223
1179.6348
1240.7019
1287.7319
1350.7330
1425.7629
1475.7777
1543.8167
1590.8544
1633.8363
1691.9369
1882.8838
2033.0941
2154.1067
2211.1528
2383.9951
2705.2224
799.0
1441.8
2084.6
2727.4
3370.2
4013.0
4700 MS/MS Precursor 1240.7 Spec #1 MC[BP = 531.2, 39]
% Intensity
Mass (m/z)
38.8
531.2275
175.0968
813.3505
1087.3928
548.2485
1201.4603
704.3178
1191.4955
428.1862
537.2323
982.3949
1216.8173
9.0
269.4
529.8
790.2
1050.6
1311.0


4700 Reflector Spec #1 MC[BP = 870.6, 862]
SPSS2107
% Intensity
Mass (m/z)
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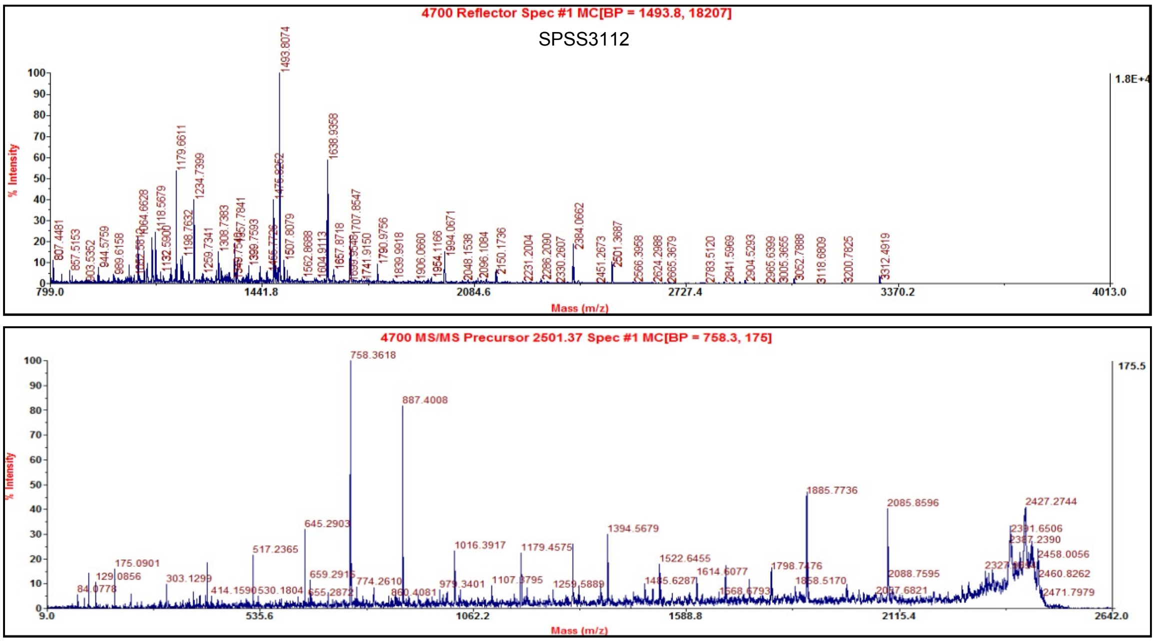
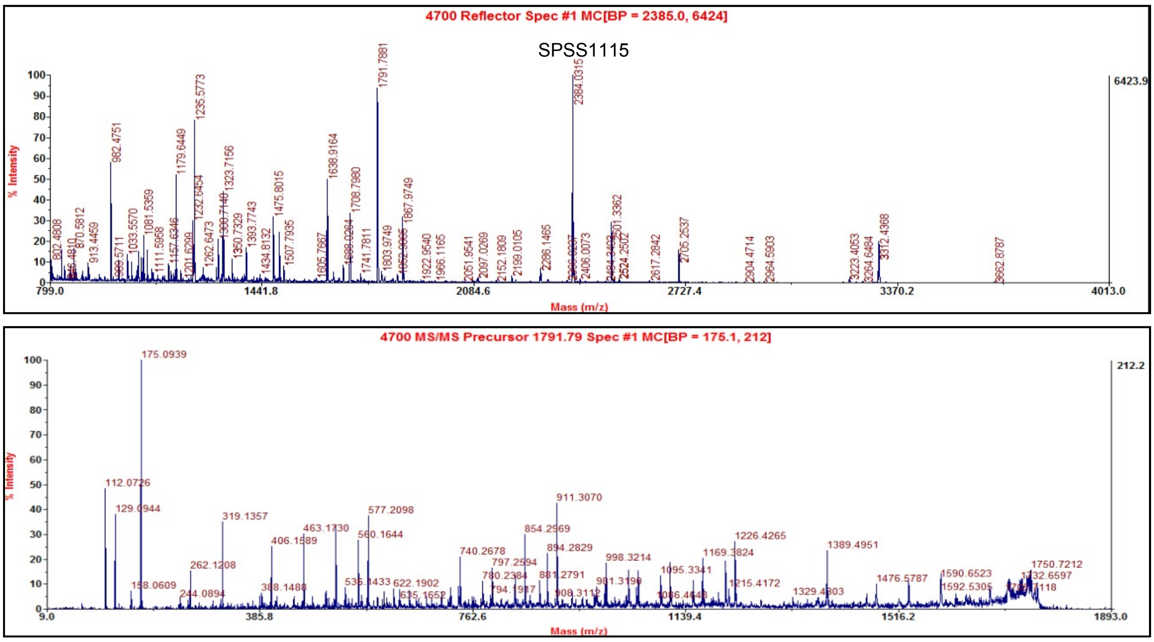
870.5674
842.5335
954.4408
1053.5557
907.4346
917.2925
1126.5394
1179.6141
1235.6216
1320.6121
1382.6727
1443.7445
1493.7604
1538.7632
1584.7498
1649.8236
1707.8062
1812.8833
1867.9069
1957.9230
2022.9053
2096.9885
2212.1230
2383.9805
2444.2507
799.0
1441.8
2084.6
2727.4
3370.2
4013.0
4700 MS/MS Precursor 962.526 Spec #1 MC[BP = 917.7, 47]
% Intensity
Mass (m/z)
47.5
917.7094
919.6490
938.6122
789.5865
175.1992
39.0066
634.4819
815.7228
935.5264
9.0
210.6
412.2
613.8
815.4
1017.0


4700 Reflector Spec #1 MC[BP = 1493.8, 18207]
SPSS3112
% Intensity
Mass (m/z)
799.0
1441.8
2084.6
2727.4
3370.2
4013.0
1.8E+4
4700 MS/MS Precursor 2501.37 Spec #1 MC[BP = 758.3, 175]
% Intensity
Mass (m/z)
9.0
535.6
1062.2
1588.8
2115.4
2642.0
175.5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SPSS1115
% Intensity
Mass (m/z)
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1441.8
2084.6
2727.4
3370.2
4013.0
6423.9
4700 MS/MS Precursor 1791.79 Spec #1 MC[BP = 175.1, 212]
% Intensity
Mass (m/z)
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762.6
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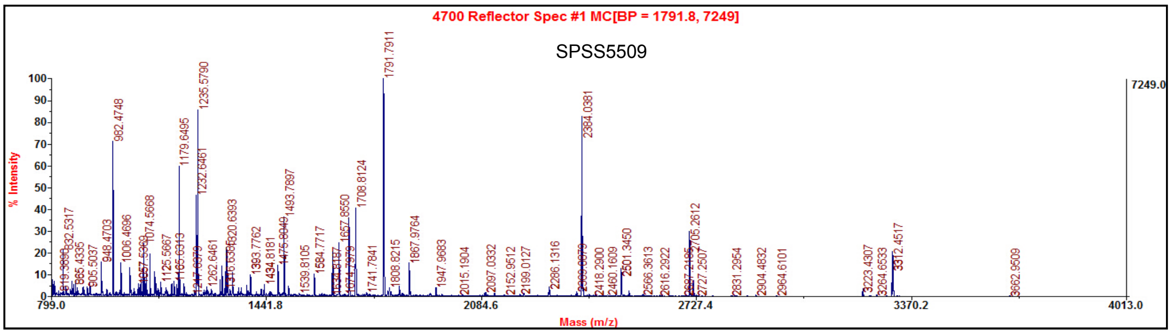
1516.2
1893.0
212.2


4700 Reflector Spec #1 MC[BP = 1791.8, 7249]
SPSS5509
% Intensity
Mass (m/z)
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799.0
1441.8
2084.6
2727.4
3370.2
4013.0
1791.7911
2384.0381
1235.5790
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1179.6495
1232.6461
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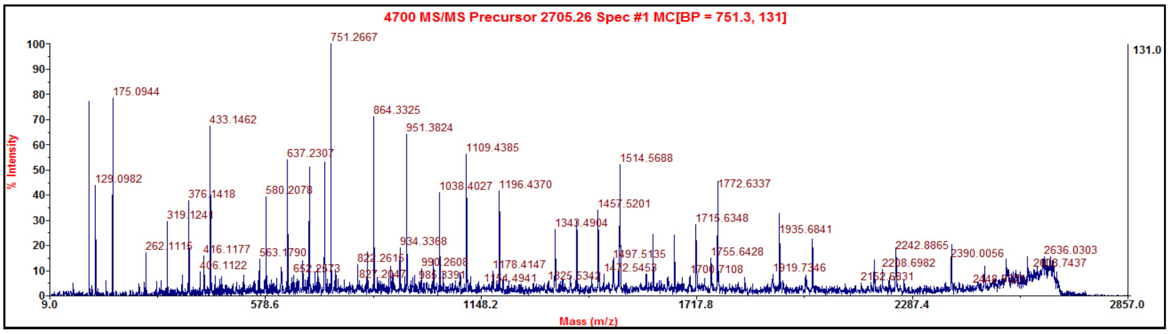
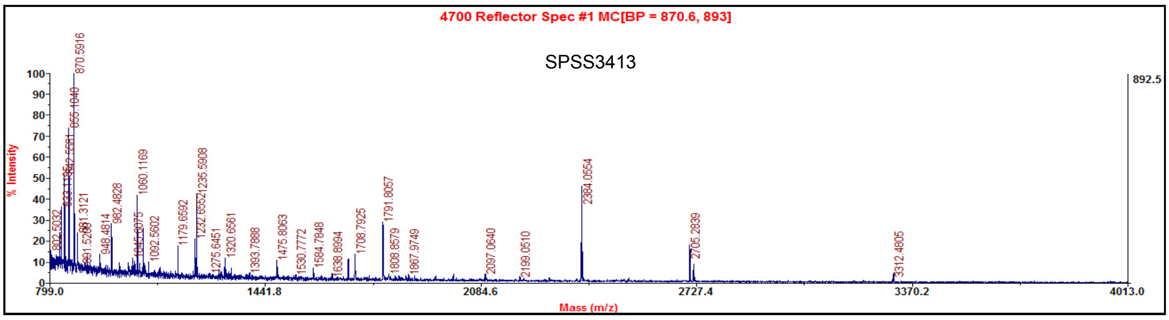
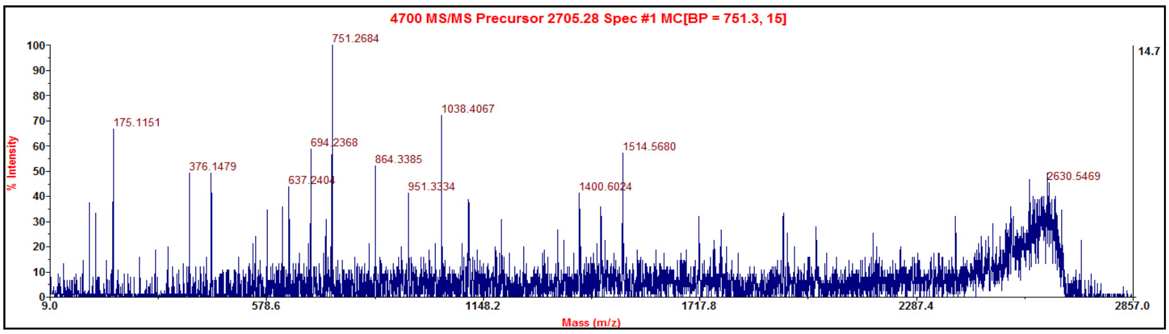
2705.2612
3312.4517
3662.9509


4700 MS/MS Precursor 2705.26 Spec #1 MC[BP = 751.3, 131]
% Intensity
Mass (m/z)
131.0
9.0
578.6
1148.2
1717.8
2287.4
2857.0
751.2667
175.0944
864.3325
433.1462
951.3824
1109.4385
637.2307
1514.5688
129.0982
1772.6337
1196.4370
1038.4027
376.1418
580.2078
1457.5201
319.1241
1715.6348
1935.6841
2242.8865
2390.0056
2636.0303


4700 Reflector Spec #1 MC[BP = 870.6, 893]
SPSS3413
% Intensity
Mass (m/z)
892.5
799.0
1441.8
2084.6
2727.4
3370.2
4013.0
870.5916
855.1040
1060.1169
1235.5908
982.4828
2384.0554
1791.8067
2705.2839
3312.4805


4700 MS/MS Precursor 2705.28 Spec #1 MC[BP = 751.3, 15]
% Intensity
Mass (m/z)
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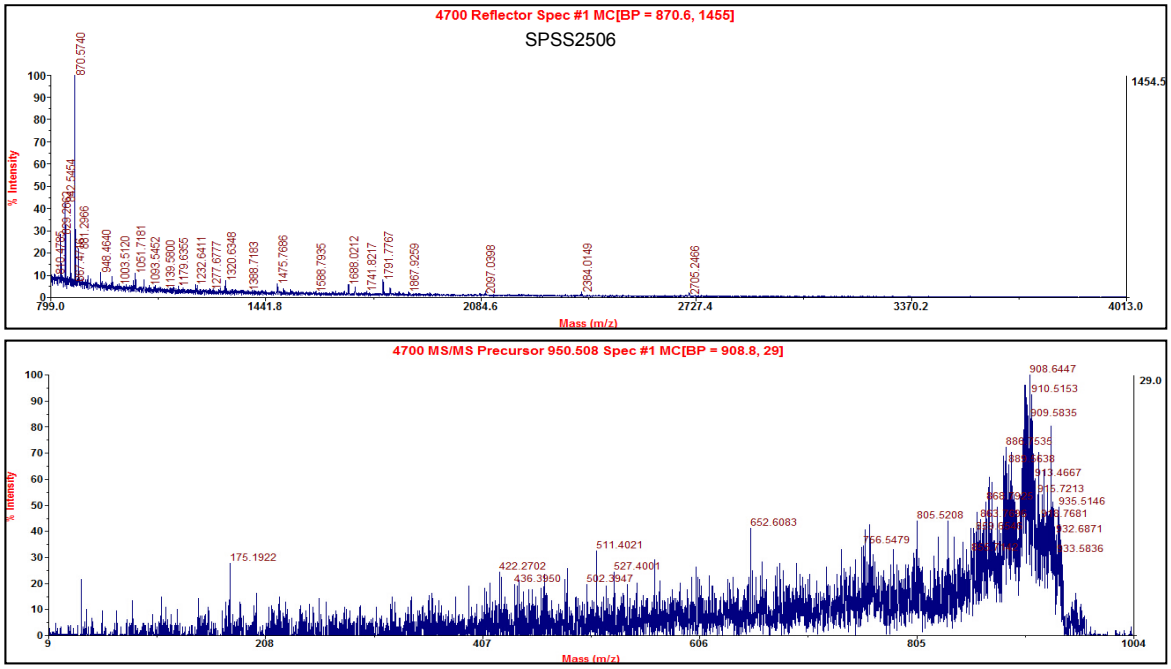
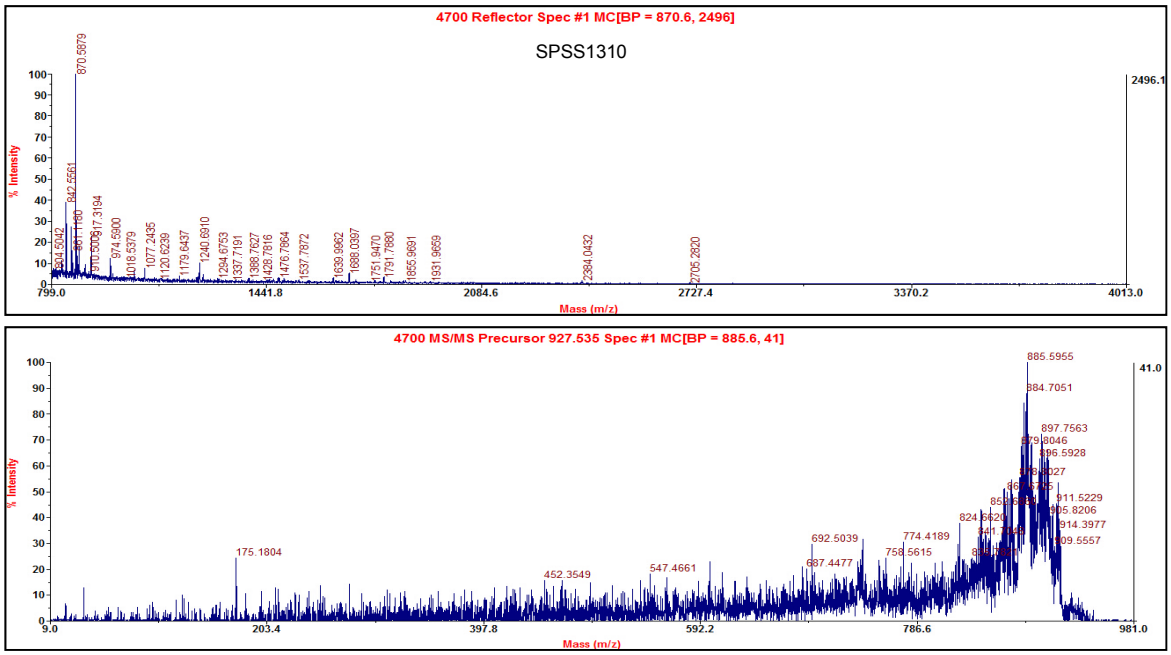
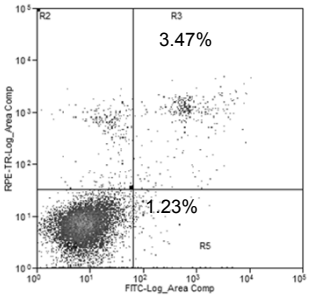
578.6
1148.2
1717.8
2287.4
2857.0
751.2684
1038.4067
175.1151
694.2368
1514.5680
376.1479
864.3385
637.2404
951.3334
1400.6024
2630.5469



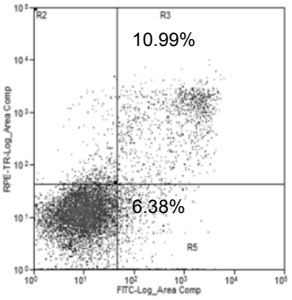


Proteomic analysis reveals differential protein expression of control and SFE-treated HepG2 cells. (A) One pair of 2DE gels of control and SFE-treated groups. (B) The MALDI-TOF/TOF spectrograms of nine proteins showed in Table 1.

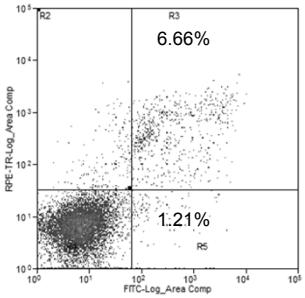
Supplementary fig. 3



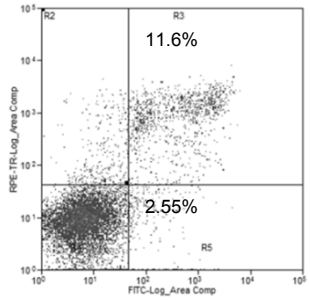
Control



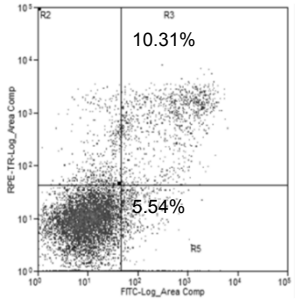
SFE



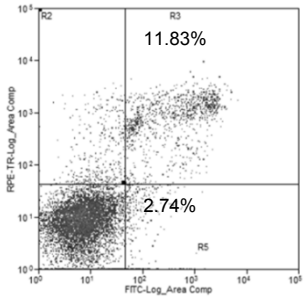
NC



siK8/18-1



siK8/18-2



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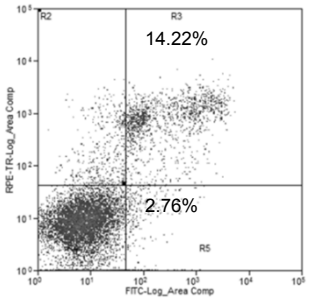
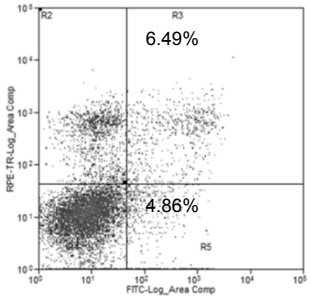
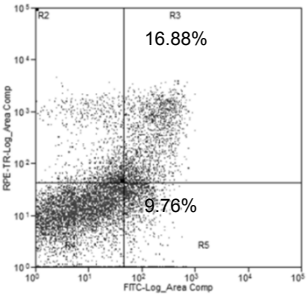


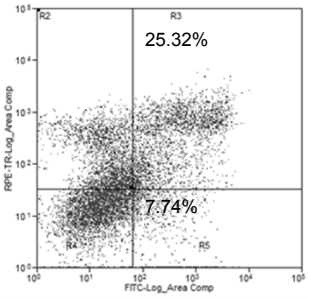
siK8/18-5



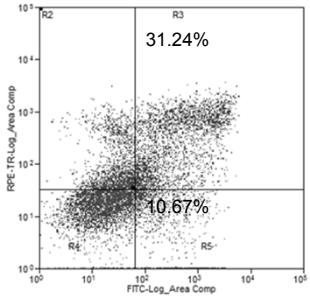
Poly-HEMA-control



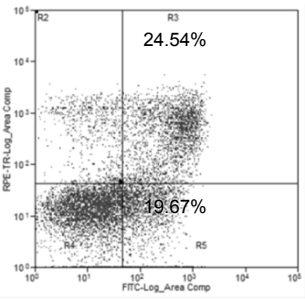
Poly-HEMA-SFE



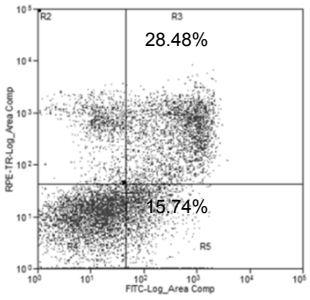
Poly-HEMA-NC



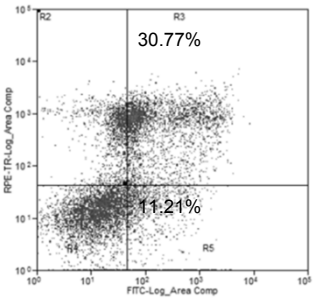
Poly-HEMA-siK8/18-1



Poly-HEMA-siK8/18-2



Poly-HEMA-siK8/18-4



Poly-HEMA-siK8/18-5

- SFE decreased the resistance to anoikis in the liver cancer cell lines through decreasing keratins 8 and 18. The cells were all treated with 48h on 6-well plates at a density of 1.2×105, and the apoptosis ratios were determined by flow cytometry analysis as showed in Figure 4D.

Supplementary Table 1 Inhibitions of SFE on HepG2 and SMMC7721 cells. HepG2 and SMMC7721 cells were treated with various concentrations (0, 10,20,30,40 and 50μM) of SFE for various time (1, 2, 3 day) .Cell proliferation viability was determined by the MTT assay.

	Time (day)	suppression ratio (%)				
concentration (μM)		10	20	30	40	50
HepG2	1	9.31	17.73	18.89	26.77	29.49
	2	19.59	27.97	33.89	47.02	52.69
	3	7.82	28.97	35.47	38.02	42.04
SMMC7721	1	10.38	13.56	13.56	15.8	23.82
	2	0.26	14.99	26.68	21.26	28.55
	3	0.07	11.66	14.45	26.56	29.9