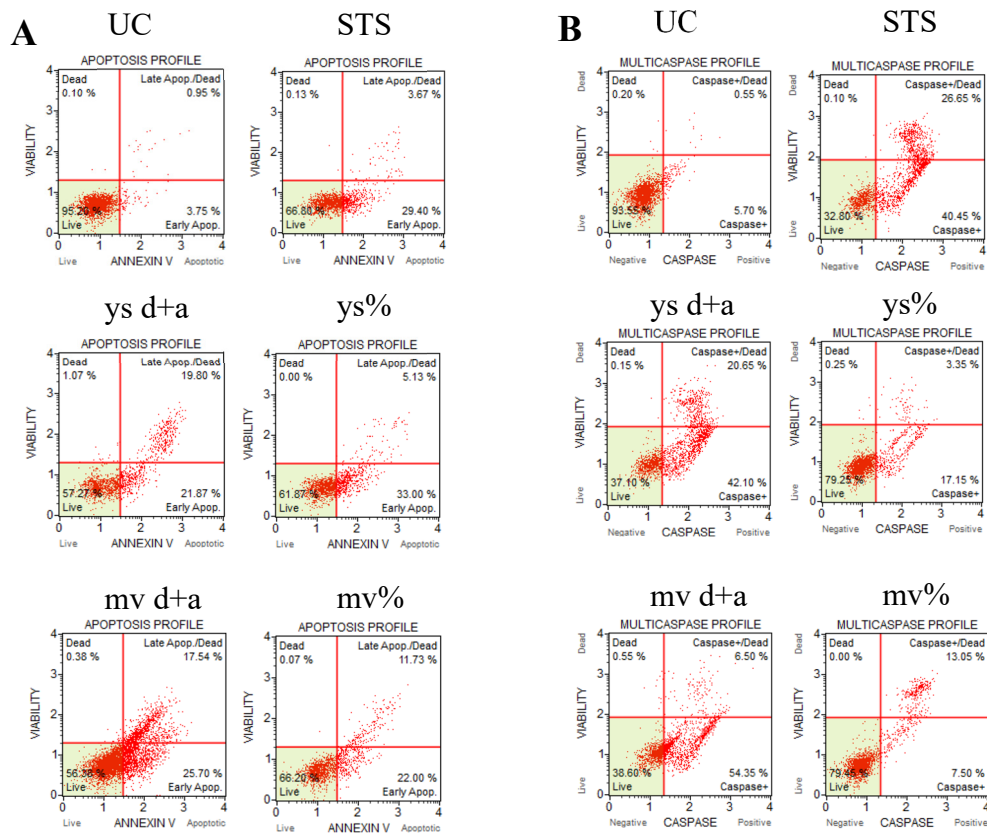


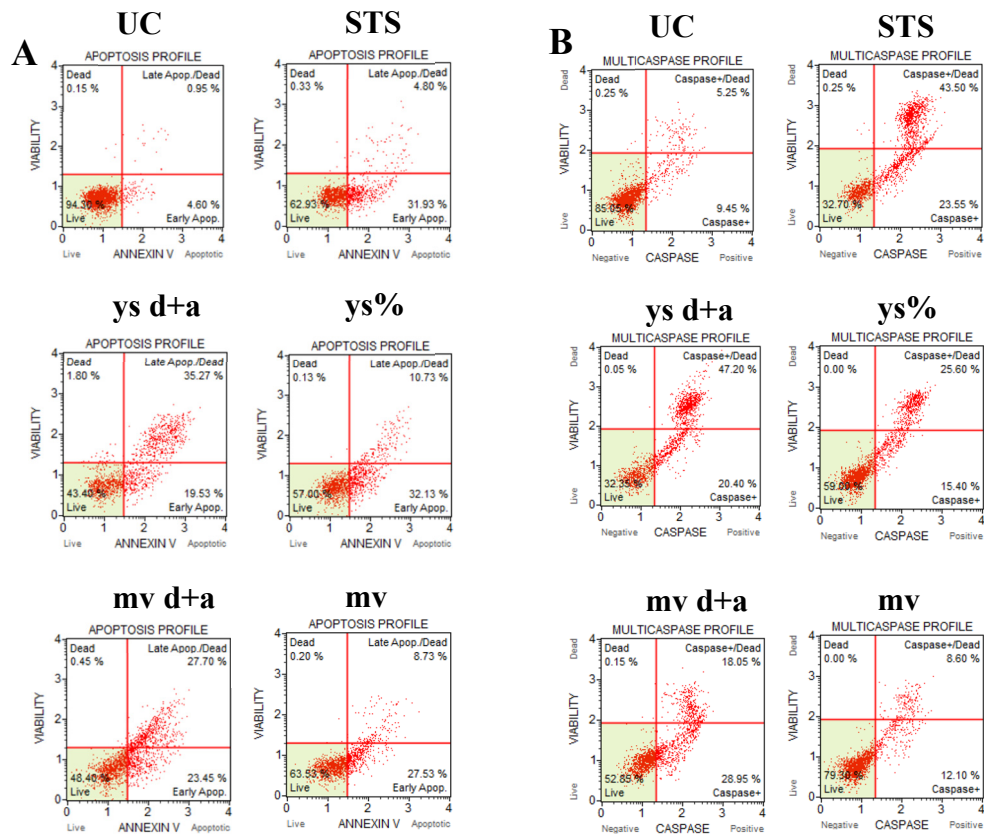
**Table S1.** Nucleotide sequences of primers.

Gene	Primers forward 5'→3'	Primers reverse 5'→3'	NCBI Reference Sequence
<i>AIFM1</i>	TGGTGCATCAGGGGGCAAAA	TGAAGCAGATAACGCGGCCT	NM_004208.4
<i>AKT1</i>	CCATCTGTCACCAGGGGCTT	ATAGCCACGTCGCTCATGGT	NM_005163.2
<i>Apaf-1</i>	GGACAGTACCCTGCTGGCAA	CACCCAGCCTCCATGGGTAG	NM_013229.3
<i>BAD</i>	GGGTCCACCGGGTTCTGAG	AAGGCAGAGGCAGGTACCCC	NM_004322.3
<i>BBC3</i>	AATTTGGCATGGGGTCTGCC	CTCCCTGGGGCCACAAATCT	NM_001127240.3
<i>CASP-3</i>	GCGTCGCCTTGAAATCCCAG	GCACACCCACCGAAAACCAG	NM_004346.4
<i>CASP-7</i>	CGACGGAGAGAGACTGTGCC	CGAGGACCGGTCTGGCTTAG	NM_001227.5
<i>CASP-8</i>	GGCCTGTGACGAAGGTGCTA	CAGGAACCTGAGGGAGGCCA	NM_001372051.1
<i>DIABLO</i>	TTTGGGCACCAGAGCAGACA	GGACGGGAACACACGAGGTC	NM_019887.6
<i>FADD</i>	AGCAGAACGACCTGGAGCC	ACGAGCCAGCCTTCTCCAAT	NM_003824.4
<i>FAS</i>	ACACTGTGACCCTTGACCA	AGAAGAAGACAAAGCCACCCCA	NM_000043.6
<i>TP53</i>	GGTGACACGCTTCCCTGGAT	CATCCATTGCTTGGGACGGC	NM_000546.6
<i>ACTB</i>	GAGCACAGAGCCTCGCCTTT	CCCACGATGGAGGGGAAGAC	NM_001101.5

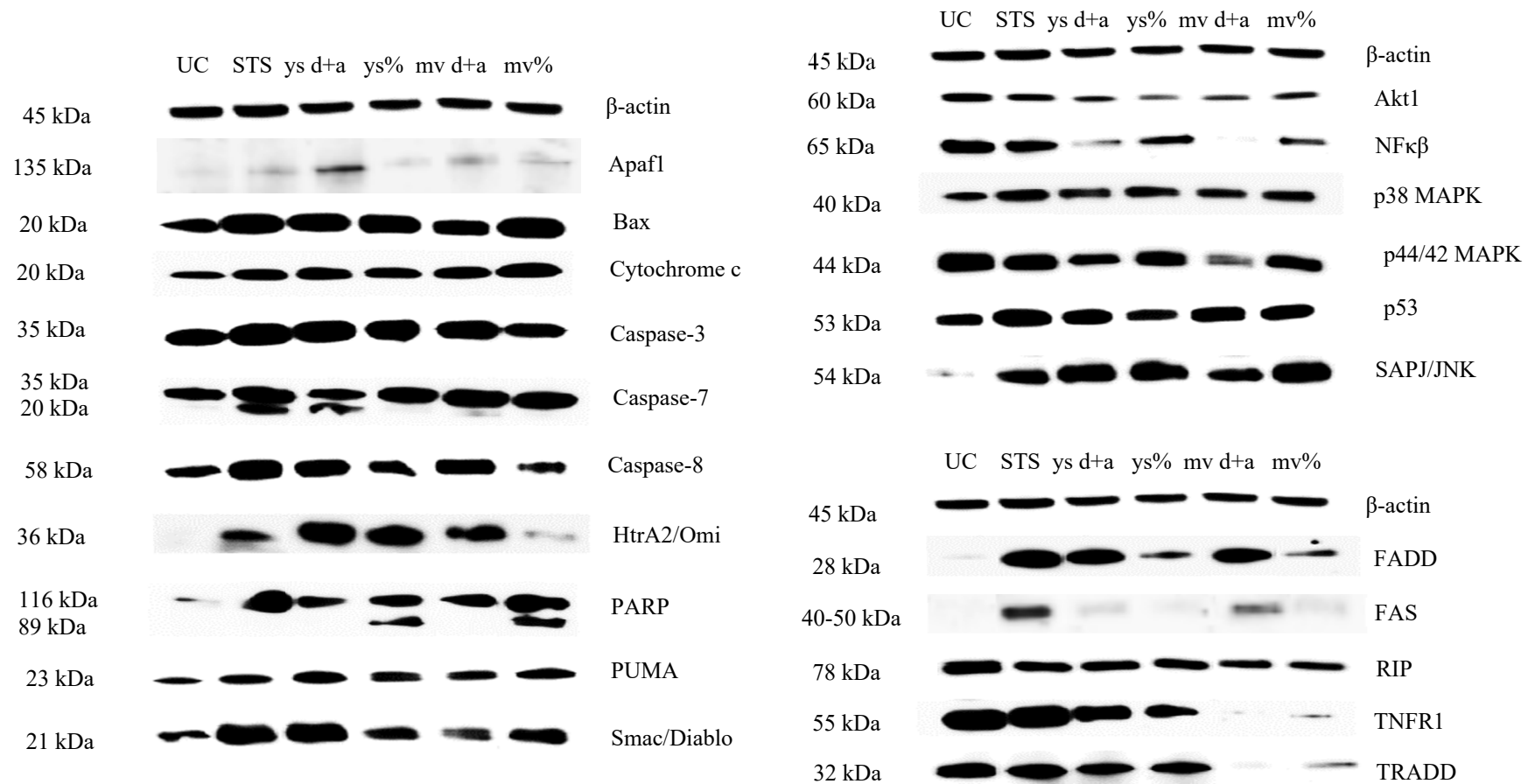
*AIFM1*, apoptosis inducing factor mitochondria associated 1; *AKT1*, serine/threonine kinase 1; *Apaf-1*, apoptotic peptidase activating factor 1; *BAD*, Bcl2-associated agonist of cell death; *BBC3*, Bcl2 binding component 3, *CASP-3*, caspase-3; *CASP-7*, caspase -7; *CASP-8*, caspase-8; *DIABLO*, diablo IAP-binding mitochondrial protein; *FADD*, FAS associated death domain; *FAS*, FAS cell surface death receptor; *TP53*, tumor protein p53.



**Figure S1.** Cell apoptosis results of DU145 prostate cancer cells at treated with experimental juices. UC, untreated control. STS, staurosporine. ys d+a, juice of young shoots subjected to *in vitro* gastrointestinal digestion and absorption. ys%, fresh, 5% juice of young shoots. mv d+a, juice of the mature vegetable subjected to *in vitro* gastrointestinal digestion and absorption. mv%, fresh, 5% juice of the mature vegetable. (A) Annexin V staining. (B) Multicaspase assay. The apoptosis profiling and apoptotic cell counts were obtained using flow cytometry (Muse® Cell Analyzer) and Muse® Annexin V and Dead Cell Assay Kit and Muse® MultiCaspase Assay Kit.

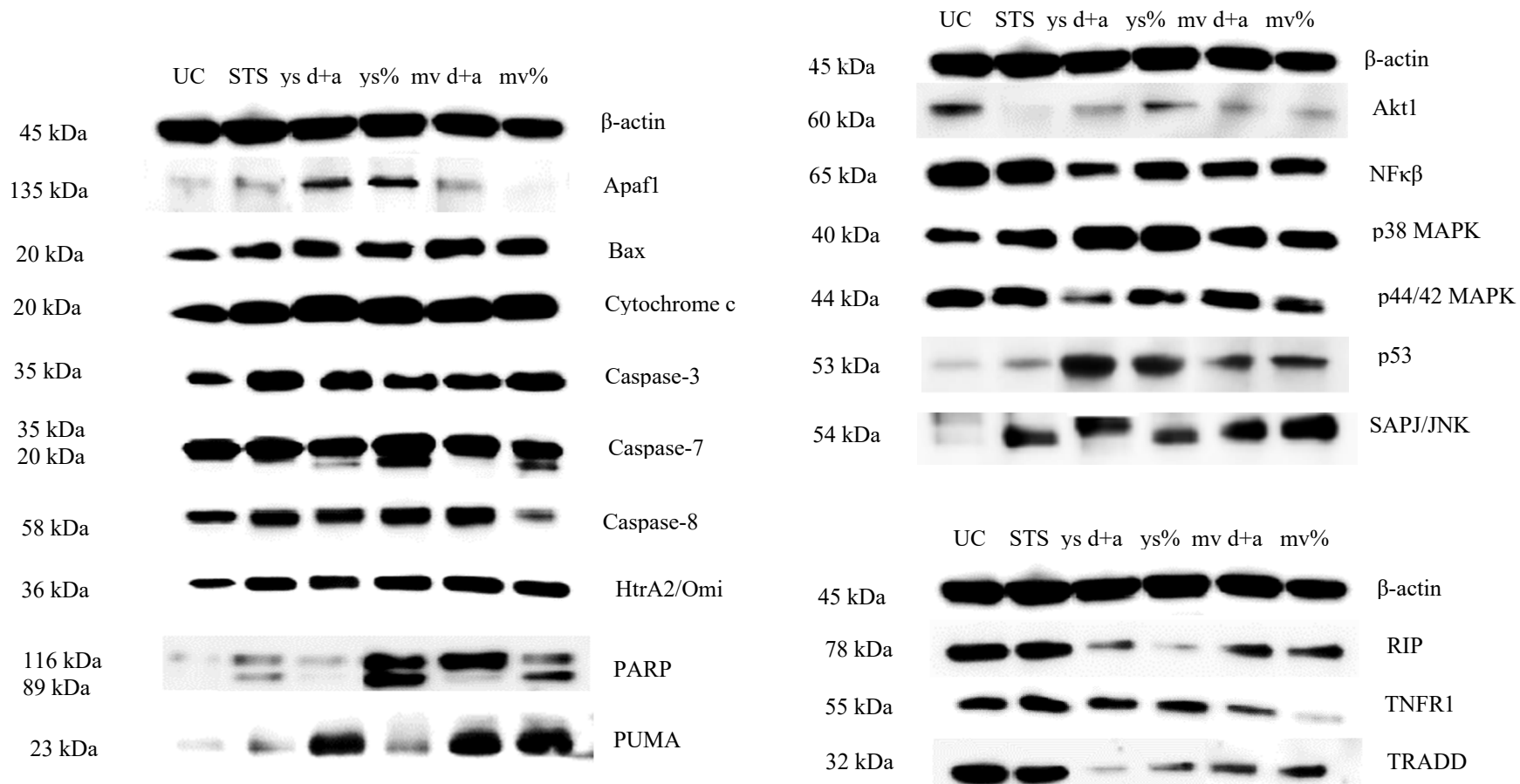


**Figure S2.** Cell apoptosis results of LNCaP prostate cancer cells at treated with experimental juices. UC, untreated control. STS, staurosporine. ys d+a, juice of young shoots subjected to *in vitro* gastrointestinal digestion and absorption. ys%, fresh, 5% juice of young shoots. mv d+a, juice of the mature vegetable subjected to *in vitro* gastrointestinal digestion and absorption. mv%, fresh, 5% juice of the mature vegetable. (A) Annexin V staining. (B) Multicaspase assay. The apoptosis profiling and apoptotic cell counts were obtained using flow cytometry



**Figure S3. Expression of proteins involved in proliferation and apoptosis signaling in DU145 prostate cancer cells.** DU145 prostate cancer cells were treated for 24 h with: STS, staurosporine. ys d+a, juice of young shoots subjected to *in vitro* gastrointestinal digestion and absorption. ys%, fresh, 5% juice of young shoots. mv d+a, juice of the mature vegetable subjected to *in vitro* gastrointestinal digestion and absorption. mv%, fresh, 5% juice of the mature vegetable. Results are expressed as a mean  $\pm$  SD normalized to the internal reference protein ( $\beta$ -actin). Untreated negative control (UC) was set as 100% expression level. Statistical significance was based on t-test  $*p \leq 0.05$  vs. UC.

*Apaf-1*, apoptotic peptidase activating factor 1; *Bax*, Bcl-2-associated X protein; *cytochrome c*; *caspase-3*; *caspase-7*; *caspase-8*; *HtrA2/Omi*, mitochondrial serine protease; *PARP*, poly (ADP-ribose) polymerase, *PUMA*, p53 upregulated modulator of apoptosis, *Smac/Diablo*, second mitochondria-derived activator of caspase; *FADD*, Fas associated death domain; *FAS*, Fas cell surface death receptor; *RIP*, receptor-interacting protein kinase; *TNFR1*, tumor necrosis factor receptor-1; *TRADD*, tumor necrosis factor receptor type 1-associated death domain; *Akt1*, serine/threonine kinase; *NF- $\kappa$ B* nuclear factor kappa B; *p38*, mitogen-activated protein kinase; *p44/42*, mitogen-activated protein kinase; *p53*, tumor protein p53; *SAPK/JNK*, stress-activated protein kinase.



**Figure S4. Expression of proteins involved in proliferation and apoptosis signaling in LNCaP prostate cancer cells.** LNCaP prostate cancer cells were treated for 24 h with: STS, staurosporine. ys d+a, juice of young shoots subjected to *in vitro* gastrointestinal digestion and absorption. ys%, fresh, 5% juice of young shoots. mv d+a, juice of the mature vegetable subjected to *in vitro* gastrointestinal digestion and absorption. mv%, fresh, 5% juice of the mature vegetable. Results are expressed as a mean  $\pm$  SD normalized to the internal reference protein ( $\beta$ -actin). Untreated negative control (UC) was set as 100% expression level. Statistical significance was based on t-test \* $p \leq 0.05$  vs. UC.

*Apaf-1*, apoptotic peptidase activating factor 1; *Bax*, Bcl-2-associated X protein; *cytochrome c*; *caspase-3*; *caspase-7*; *caspase-8*; *HtrA2/Omi*, mitochondrial serine protease; *PARP*, poly (ADP-ribose) polymerase, *PUMA*, p53 upregulated modulator of apoptosis, *Smac/Diablo*, second mitochondria-derived activator of caspase; *FADD*, Fas associated death domain; *FAS*, Fas cell surface death receptor; *RIP*, receptor-interacting protein kinase; *TNFR1*, tumor necrosis factor receptor-1; *TRADD*, tumor necrosis factor receptor type 1-associated death domain; *Akt1*, serine/threonine kinase; *NF- $\kappa$ B* nuclear factor kappa B; *p38*, mitogen-activated protein kinase; *p44/42*, mitogen-activated protein kinase; *p53*, tumor protein p53; *SAPK/JNK*, stress-activated protein kinase.