

## Supplementary Materials

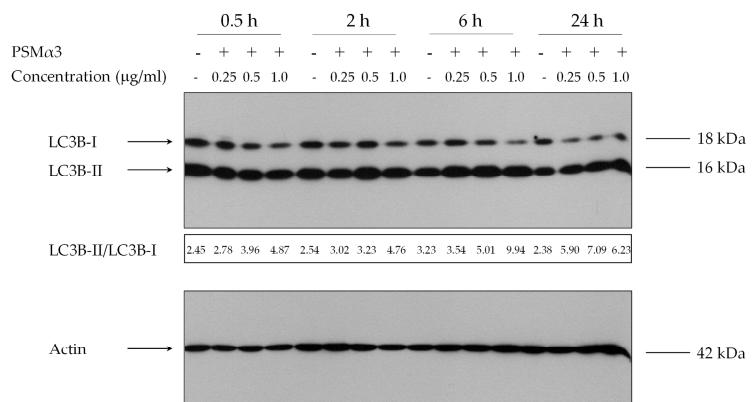
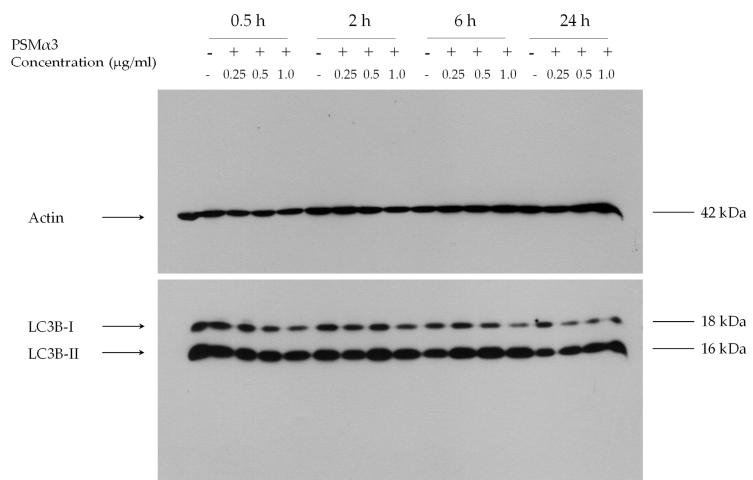


Figure S1. The kinetics of endogenous LC3B-II expression in PSM $\alpha$ 3-treated HaCaT keratinocytes



The uncropped western blot images used for Figure S1.

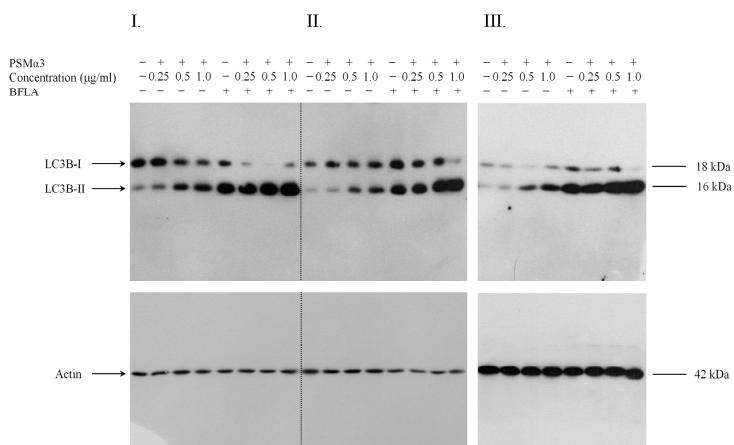


Figure S2. PSM $\alpha$ 3 stimulates the autophagic flux.

Western blot images used to calculate the fold changes of LC3B-II shown in Figure 1.

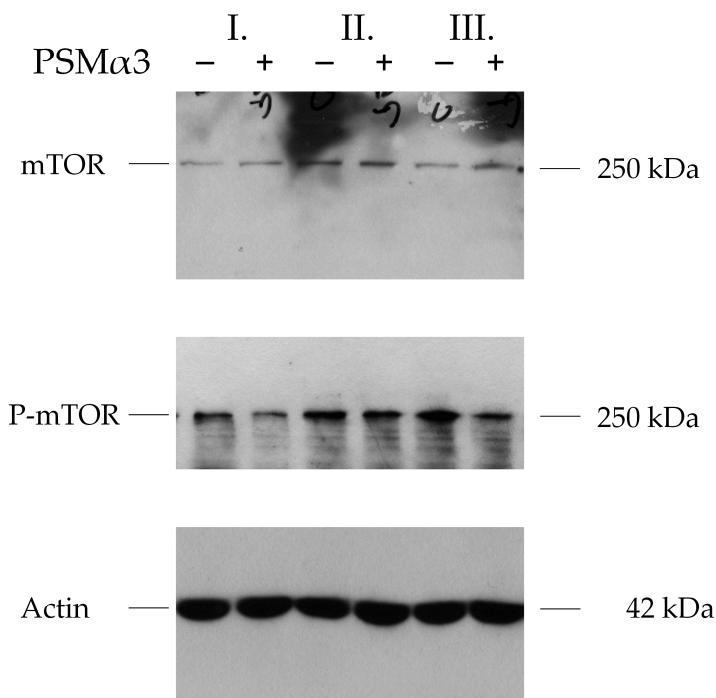


Figure S3: PSM $\alpha$ 3 alters the levels of mTOR and phospho-mTOR (S2448) levels in HaCaT keratinocytes. Western blot images used to calculate the fold changes of mTOR and phospho-mTOR (S2448) shown in Figure 5C-F.

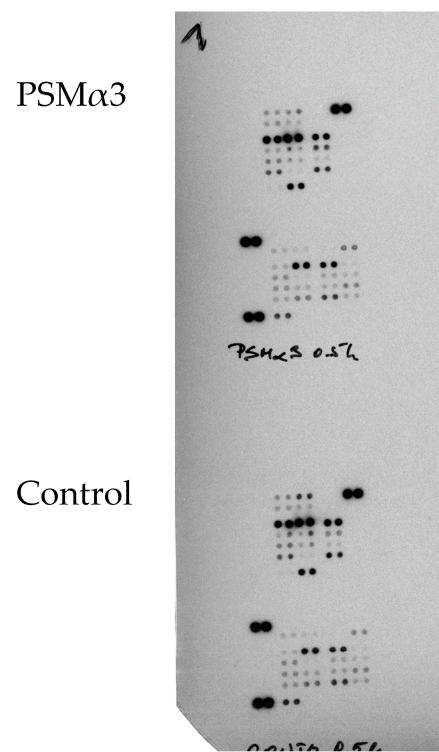


Figure S4: PSM $\alpha$ 3 alters the phospho-kinase array profile of HaCaT keratinocytes. Uncropped image of the phospho-kinase array used to create Figure 5A and 5B.

Table S1. List of the detected phospho-proteins by using the Proteome Profiler™ human phospho-kinase array kit.

Membrane/Coordinate	Target/Control	Phosphorylation Site
A-A1, A2	Reference Spot	-
B-A11, A12	Akt 1/2/3	T308
B-A13, A14	Akt 1/2/3	S473
B-A17, A18	Reference Spot	-
A-B3, B4	CREB	S133
A-B5, B6	EGF R	Y1086
A-B7, B8	eNOS	S1177
A-B9, B10	ERK1/2	T202/Y204, T185/Y187
B-B11, B12	Chk-2	T68
B-B13, B14	c-Jun	S63
A-C3, C4	Fgr	Y412
A-C5, C6	GSK-3 $\alpha$ / $\beta$	S21/S9
A-C7, C8	GSK-3 $\beta$	S9
A-C9, C10	HSP27	S78/S82
B-C11, C12	p53	S15
B-C13, C14	p53	S46
B-C15, C16	p53	S392
A-D3, D4	JNK 1/2/3	T183/Y185, T221/Y223
A-D5, D6	Lck	Y394
A-D7, D8	Lyn	Y397
A-D9, D10	MSK1/2	S376/S360
B-D11, D12	p70 S6 Kinase	T389
B-D13, D14	p70 S6 Kinase	T421/S424
B-D15, D16	PRAS40	T246
A-E3, E4	p38 $\alpha$	T180/Y182
A-E5, E6	PDGF R $\beta$	Y751
A-E7, E8	PLC- $\gamma$ 1	Y783
A-E9, E10	Src	Y419
B-E11, E12	PYK2	Y402
B-E13, E14	RSK1/2	S221/S227
B-E15, E16	RSK1/2/3	S380/S386/S377
A-F3, F4	STAT2	Y689
A-F5, F6	STAT5a/b	Y694/Y699
A-F7, F8	WNK1	T60
A-F9, F10	Yes	Y426
B-F11, F12	STAT1	Y701
B-F13, F14	STAT3	Y705
B-F15, F16	STAT3	S727
A-G1, G2	Reference Spot	-
A-G3, G4	$\beta$ -Catenin	-

A-G9, G10	PBS (Negative Control)	-
B-G11, G12	STAT6	Y641
B-G13, G14	HSP60	-
B-G17, G18	PBS (Negative Control)	-