Supplementary Information

Table S1. *De novo* sequencing results of the 27 peptides detected in F1.

Peptides $[M + H]^+$	Fragmentation Ions (*m/z*)
VVCVPW (702 Da)	y ions: 205.10(y1), 302.15(y2), 401.22(y3), 504.23(y4), 603.30(y5) b ions: 199.14(b2), 302.15(b3), 401.22(b4)
VKF (393 Da)	y ions: 147.11(y1), 294.18(y2) b ion: 100.08(b1)
LYHVL (644 Da)	y ions: 132.10(y1), 368.23(y3), 531.29(y4) b ions: 277.16(b2), 513.28(b4)
LVKF (506 Da)	y ions: 166.09(y1), 294.18(y2), 393.25(y3) b ions: 213.16(b2), 343.26(b3)
LFR (435 Da)	y ions: 175.12(y1), 322.19(y2) b ion: 261.16(b2)
PLFPK (601 Da)	y ions: 147.11(y1), 244.17(y2), 391.23(y3), 504.32(y4) b ions: 98.06(b1), 211.14(b2), 358.21(b3), 455.27(b4)
LASPTM (619 Da)	y ions: 150.08(y1), 254.15(y2), 348.18(y3), 435.26(y4), 506.30(y5) b ions: 98.06(b1), 211.14(b2), 358.21(b3), 455.27(b4)
LFVAAP (617 Da)	y ions: 116.07(y1), 187.11(y2), 357.21(y4), 504.28(y5) b ions: 185.14(b2), 369.30(b4), 470.34(b5)
FKR (450 Da)	y ions: 175.12(y1), 303.21(y2) b ion: 276.17(b2)
MPFLFK (782Da)	y ions: 147.11(y1), 294.18(y2), 407.27(y3), 554.33(y4), 651.39(y5) b ions: 229.10(b2), 376.17(b3), 489.25(b4)
VFKAF (611 Da)	y ions: 166.09(y1), 237.12(y2), 365.22(y3), 512.29(y4) b ions: 247.14(b2)
LR (288 Da)	y ion: 175.12(y1)
HFEAMR (790 Da)	y ions: 175.12(y1), 377.20(y3), 506.24(y4), 653.31(y6) b ions: 138.07(b1), 285.14(b2), 485.21(b4)
LLHSPP (663 Da)	y ions: 116.07(y1), 213.12(y2), 300.16(y3), 437.21(y4), 550.30(y5) b ions: 227.18(b2), 364.23(b3)

Table S1. *Cont.*

LGECGGR (691 Da)	y ions: 175.12(y1), 289.16(y3), 392.17(y4), 521.21(y5), 578.24(y6)
	b ions: 171.11(b2), 300.16(b3)
LLRH (538 Da)	y ions: 156.08(y1), 312.18(y2), 425.26(y3)
	b ions: 227.18(b2), 383.28(b3)
LKLP (470 Da)	y ions: 116.07(y1), 229.16(y2), 357.25(y3)
	b ions: 242.19(b2)
RR (331 Da)	y ion: 175.12(y1)
LLMPK (601 Da)	y ions: 147.11(y1), 244.17(y2), 375.21(y3), 488.29(y4)
	b ions: 227.18(b2), 455.27(b4)
LLLR (514 Da)	y ions: 175.12(y1), 288.20(y2), 401.29(y3)
	b ions: 227.18(b2), 340.26(b3)
LEGR (474 Da)	y ions: 232.14(y2), 361.18(y3)
	b ions: 243.13(b2), 300.16(b3)
LALR (472 Da)	y ions: 175.12(y1), 288.20(y2), 359.24(y3)
	b ion: 185.13(b2)
LGALPF (617 Da)	y ions: 166.09(y1), 263.14(y2), 376.22(y3), 447.26(y4), 504.28(y5)
	b ions: 171.11(b2), 242.15(b3), 452.29(b5)
NKPGDML (887 Da)	y ions: 132.10(y1), 264.14(y2), 378.17(y3), 435.19(y4), 645.33(y6), 773.42(y7)
	b ions: 243.15(b2), 453.28(b4), 756.37(b7)
LLLLR (627 Da)	y ions: 175.12(y1), 288.20(y2), 401.29(y3), 514.37(y4)
	b ions: 227.18(b2), 340.26(b3), 453.34(b4)
VGGPR (485 Da)	y ions: 175.12(y1), 272.17(y2), 392.19(y3), 386.22(y4)
	b ions: 100.08(b1), 157.10(b2), 214.12(b3), 311.17(b4)
LK (260 Da)	y ion: 146.99(y1)

Figure S1. nano-LC-MS/MS analysis of sF1 and TIC of F1.

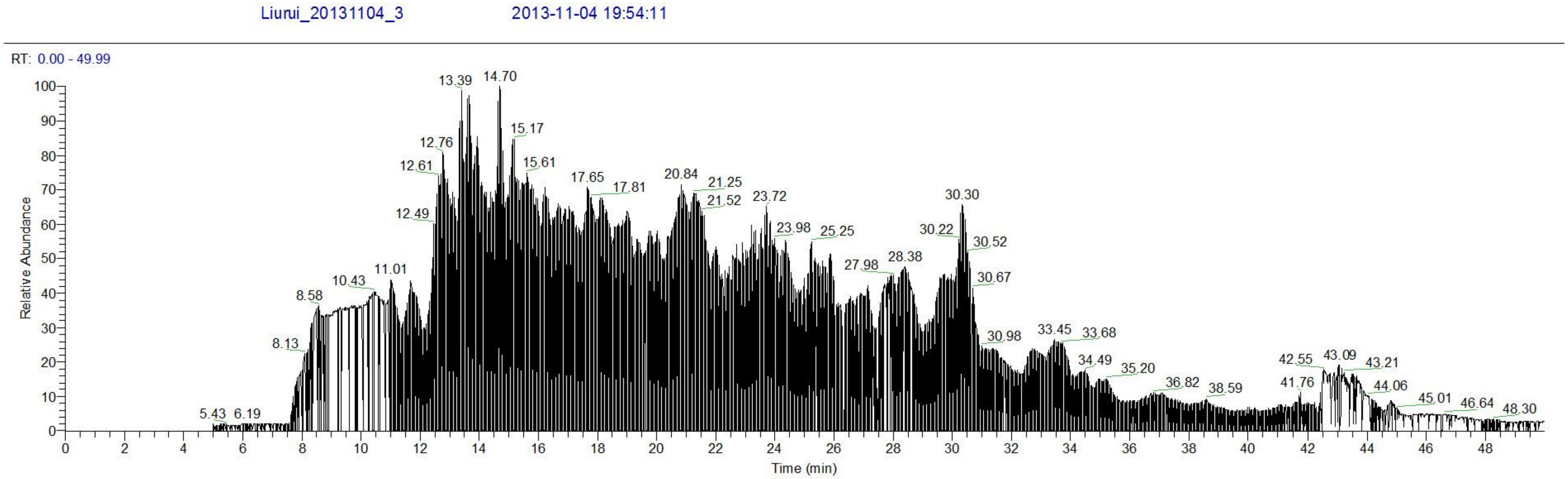

Figure S2. nano-LC-MS/MS analysis of doubly charged ions in F1. (**A**) *m/z* 644 precursor ion and the result of *de novo* sequencing; (**B**) *m/z* 506; (**C**) *m/z* 435; (**D**) *m/z* 601.

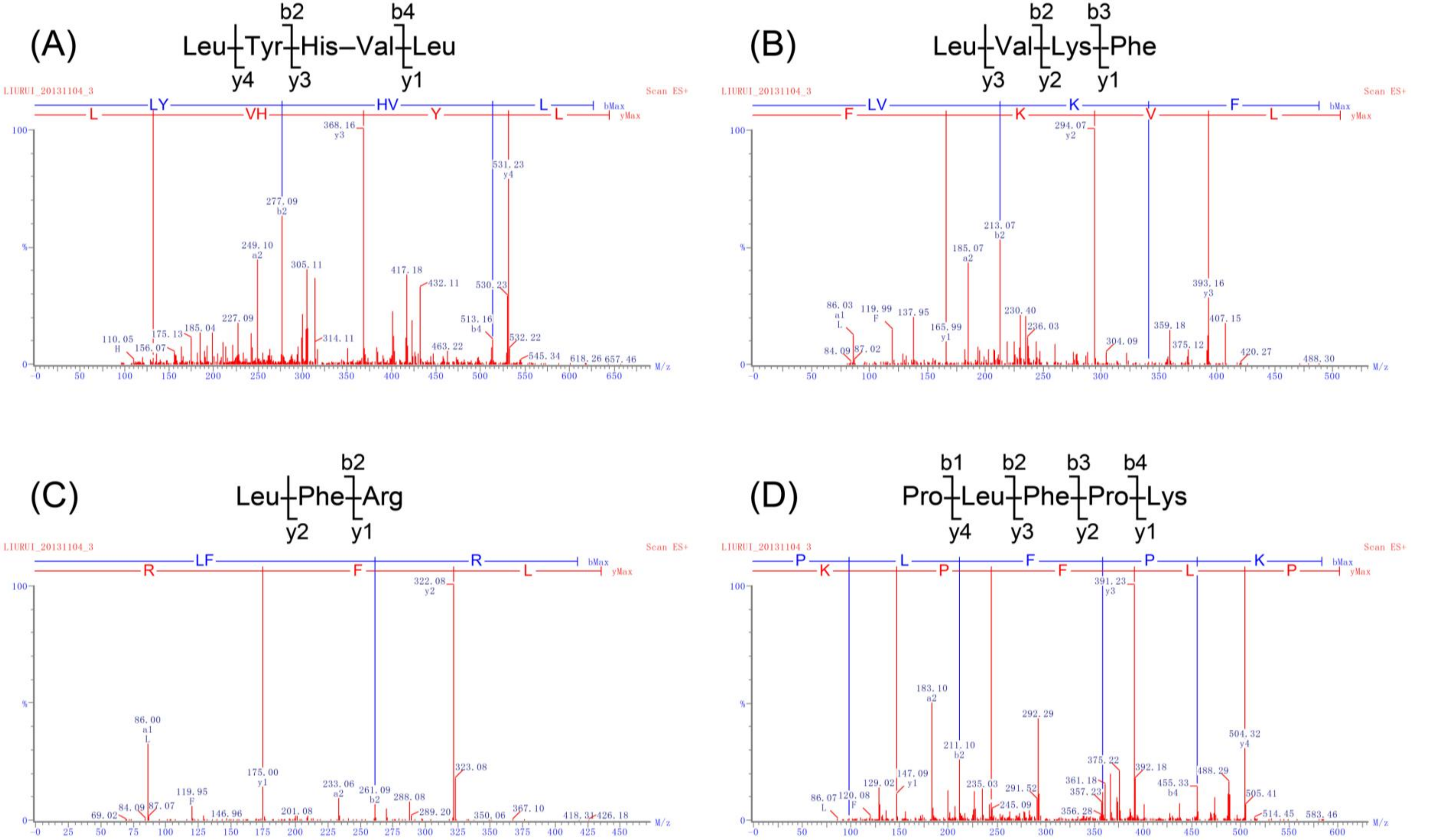

Figure S3. ACE inhibitory activity of 22 synthesized peptides.