

Supporting Information

Structure-Based Design, Synthesis, Evaluation and Crystallographic Studies of
Conformationally Constrained Smac Mimetics as Inhibitors of the X-linked
Inhibitor of Apoptosis Protein (XIAP)

Haiying Sun^{+¶}, Jeanne A. Stuckey^{^‡}, Zaneta, Nikolovska-Coleska^{+¶}, Dongguang Qin^{+¶}, Jennifer
L. Meagher[‡], Su Qiu^{+¶}, Jianfeng Lu^{+¶}, Chao-Yie Yang^{+¶}, Naoyuki Saito[§] and Shaomeng
Wang^{+¶Δ#*}

Departments of ⁺Internal Medicine, [^]Biological Chemistry, ^ΔPharmacology, [#]Medicinal
Chemistry, and [§]Radiation Oncology, [¶]Comprehensive Cancer Center, [‡]Life Sciences Institute,
[‡]Biophysics Research Division, University of Michigan, Ann Arbor, MI 48109, USA

* To whom correspondence should be addressed.

Phone: 734-615-0362.

Fax: 734-647-9647.

E-mail: shaomeng@umich.edu.

Table S1. Elemental Analysis data of new Smac mimetics containing the [8,5] bicyclic core structure.

Compounds	Formula		Elem. Anal. Required	Results
16	C ₂₇ H ₃₄ N ₄ O ₃	1.0HCl 1.0CF ₃ COOH	C 56.81, H 5.92, N 9.14	C 57.13, H 6.05, N 8.87
17	C ₂₈ H ₃₆ N ₄ O ₃	1.0HCl 2.0H ₂ O	C 61.25, H 7.53, N 10.20	C 61.10, H 7.39, N 9.99
18	C ₃₂ H ₃₈ N ₄ O ₃	1.0HCl 1.0CF ₃ COOH 0.6H ₂ O	C 59.36, H 6.04, N 8.14	C 59.58, H 6.11, N 8.15
19	C ₃₂ H ₃₈ N ₄ O ₃	1.0HCl 1.0CF ₃ COOH 0.8H ₂ O	C 59.05, H 6.06, N 8.10	C 59.12, H 6.09, N 8.16
20	C ₂₈ H ₃₆ N ₄ O ₃	1.0HCl 1.0CF ₃ COOH	C 57.46, H 6.11, N 8.93	C 57.34, H 6.27, N 8.79
21	C ₂₉ H ₃₈ N ₄ O ₃	1.0HCl 1.0CF ₃ COOH	C 58.08, H 6.29, N 8.74	C 58.02, H 6.29, N 8.60
22	C ₃₂ H ₄₂ N ₄ O ₃	1.0HCl 1.3H ₂ O	C 65.08, H 7.78, N 9.49	C 65.23, H 7.98, N 9.69
23	C ₃₂ H ₄₂ N ₄ O ₄	1.0HCl 2.5H ₂ O	C 61.18, H 7.70, N 8.92	C 61.12, H 7.55, N 8.86

24	$C_{27}H_{33}N_3O_4$	1.6H ₂ O		C 65.86, H 7.41, N 8.53	C 66.02, H 7.19, N 8.18
25	$C_{25}H_{36}N_4O_3$	1.0HCl	1.0CF ₃ COOH	C 54.87, H 6.48, N 9.48	C 54.89, H 6.50, N 9.22
26	$C_{25}H_{36}N_4O_3$	1.0HCl	1.0CF ₃ COOH	C 54.87, H 6.48, N 9.48	C 54.67, H 6.49, N 9.26
27	$C_{24}H_{34}N_4O_3$	1.0HCl	1.0CF ₃ COOH	C 54.12, H 6.29, N 9.71	C 54.20, H 6.42, N 9.67