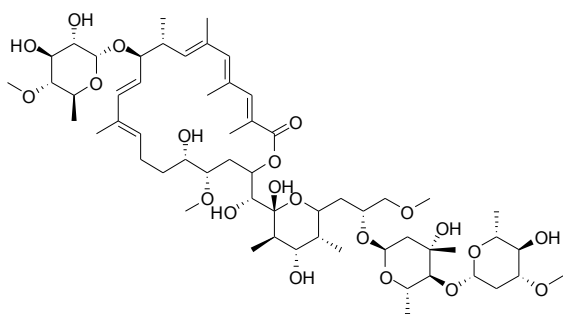


## Product Information

### Apoptolidin A, Ready Made Solution from *Amycolatopsis* sp.

Catalog Number **SML0907**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

CAS RN 194874-06-1  
Synonyms: FU 40A, Apoptolidin



#### Product Description

Molecular formula:  $\text{C}_{58}\text{H}_{96}\text{O}_{21}$   
Molecular weight: 1,129.37

Apoptolidin A is a 20-membered macrolide shown to be selectively cytotoxic against several cancer cell lines and noncytotoxic against normal cells.<sup>1-3</sup> The molecule was originally produced by *Nocardioopsis* species, and its target site was identified as mitochondrial  $\text{F}_0\text{F}_1\text{-ATPase}$ .<sup>4,5</sup>

Apoptolidin induces apoptosis selectively in rat glia cells transformed with the adenovirus oncogene  $\text{E}_1\text{A}$ .<sup>1,2</sup> Several minor apoptolidin congeners were isolated, known as Apoptolidins A–D. All apoptolidins were reported to inhibit growth of H292 cancer cells (lung carcinoma) in the submicromolar range.<sup>3</sup> Recently, a stereoselective synthesis of the Apoptolidin disaccharide was reported.<sup>6</sup>

#### Reagent

The product is supplied as a 1 mg/mL (0.88 mM) solution prepared in dimethyl sulfoxide (DMSO).

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

Divide the solution into aliquots and store the product sealed at  $-20\text{ }^{\circ}\text{C}$ . Under these conditions the product is stable for at least 2 years.

#### References

1. Kim, J.W. et al., Apoptolidin, a new apoptosis inducer in transformed cells from *Nocardioopsis* sp. *J. Antibiot.*, **50**, 628–630 (1997).
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3. Ghidu, V.P. et al., Synthesis and evaluation of the cytotoxicity of Apoptolidinones A and D. *J. Org. Chem.*, **73**, 4949–4955 (2008).
4. Salomon, A.R. et al., Understanding and exploiting the mechanistic basis for selectivity of polyketide inhibitors of  $\text{F}_0\text{F}_1\text{-ATPase}$ . *PNAS USA*, **97**, 14766–14771 (2000).
5. Salomon, A.R. et al., Apoptolidin, a selective cytotoxic agent, is an inhibitor of  $\text{F}_0\text{F}_1\text{-ATPase}$ . *Chem. Biol.*, **8**, 71–80 (2001).
6. Srinivasarao, M. et al., Noteworthy observations accompanying synthesis of the apoptolidin disaccharide. *Chem. Commun. (Camb)*, **47**, 5858–5860 (2011).

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