

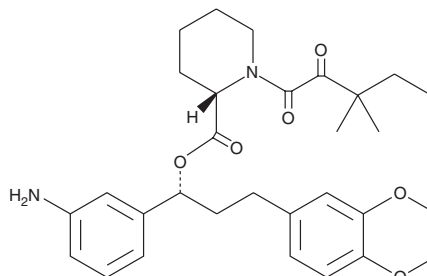
# Product Information



## SLF

Catalog No. 10007974

**Formal Name:** (1R)-1-(3-aminophenyl)-3-(3,4-dimethoxyphenyl)propyl ester-1-(3,3-dimethyl-1,2-dioxopentyl)-2S-piperidinecarboxylic acid  
**Synonym:** Synthetic Ligand of FKBP  
**MF:** C<sub>30</sub>H<sub>40</sub>N<sub>2</sub>O<sub>6</sub>  
**FW:** 524.7  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that synthetic ligand of FKBP (SLF) be stored as supplied at -20°C. It should be stable for at least one year.

SLF is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of SLF in these solvents is approximately 30 mg/ml.

SLF is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of SLF should be diluted with the aqueous buffer of choice. SLF has a solubility of approximately 0.2 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

FK-506 is a potent immunosuppressant that forms a high affinity complex ( $K_1 = 0.2$  nM) with FK-506 binding protein 12 (FKBP12). This complex inhibits the activity of the calcium/calmodulin-dependent protein phosphatase, calcineurin, leading to disruption of T-cell activation.<sup>1</sup> SLF is a cell-permeable analog of FK-506 that binds tightly to FKBP but lacks the ability to inhibit calcineurin.<sup>2</sup> By itself, SLF does not exhibit a significant cellular response. However, homodimers of SLF or heterodimers with another protein ligand, provide a method to promote the dimerization of ligand-specific fusion proteins to induce signaling events within a cellular environment.<sup>2,3</sup> For example, SLF monomers connected with a 10-atom linker activates Fas signaling *via* Fas-FKBP fusion proteins with an EC<sub>50</sub> of 6 nM.<sup>3</sup>

### References

1. Dumont, F.J. FK506, An immunosuppressant targeting calcineurin function. *Current Medicinal Chemistry* **7**, 731-748 (2000).
2. Braun, P.D., Barglow, K.T., Lin, Y.-M., *et al.* A bifunctional molecule that displays context-dependent cellular activity. *J. Am. Chem. Soc.* **125**, 7575-7580 (2003).
3. Amara, J.F., Clackson, T., Rivera, V.M., *et al.* A versatile synthetic dimerizer for the regulation of protein-protein interactions. *Proc. Natl. Acad. Sci. USA* **94**, 10618-10623 (1997).

### Related Product

FK-506 - Cat. No. 10007965

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 03/04/2010

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

custserv@caymanchem.com

#### Web

www.caymanchem.com