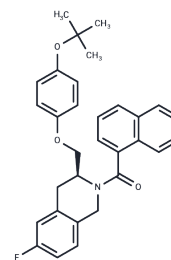


SR12418

## Chemical Properties

CAS No. : 1801185-08-9  
 Formula: C<sub>31</sub>H<sub>30</sub>FNO<sub>3</sub>  
 Molecular Weight: 483.57  
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
*Actual storage temperature shall be subject to the COA.*



## Biological Description

Description	SR12418 is a specific synthetic ligand for REV-ERB, demonstrating binding affinity for both REV-ERB $\alpha$ (IC <sub>50</sub> = 68 nM) and REV-ERB $\beta$ (IC <sub>50</sub> = 119 nM) in TR-FRET assays. SR12418 inhibits IL-17A expression in EL4 cells and suppresses TH17 cell differentiation, making it suitable for studies on experimental autoimmune encephalomyelitis (EAE) and colitis.
Targets(IC50)	Autophagy,REV-ERB,IL Receptor
In vitro	SR12418 at a concentration of 5 $\mu$ M for 96 hours can inhibit the growth of TH17 cells [1]. Under TH17 polarization induction conditions, SR12418 (5 and 10 $\mu$ M, 4 days) can suppress cell differentiation [1].
In vivo	SR12418 (50 mg/kg, intraperitoneal injection, twice daily) can inhibit the onset and disease severity of experimental autoimmune encephalomyelitis (EAE) [1]. Starting from day 18 post-immunization, SR12418 (50 mg/kg, intraperitoneal injection, twice daily) demonstrates therapeutic effects in the intervention study of relapsing-remitting experimental autoimmune encephalomyelitis [1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (165.44 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (6.82 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.068 mL	10.3398 mL	20.6795 mL
5 mM	0.4136 mL	2.068 mL	4.1359 mL
10 mM	0.2068 mL	1.034 mL	2.068 mL
50 mM	0.0414 mL	0.2068 mL	0.4136 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Mohammed Amir, et al. REV-ERB $\alpha$  Regulates TH17 Cell Development and Autoimmunity. Cell Rep. 2018 Dec 26;25 (13):3733-3749.e8.

Shuai Wang, et al. Targeting REV-ERB $\alpha$  for therapeutic purposes: promises and challenges. Theranostics. 2020 Mar 4;10(9):4168-4182.

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