

## Shield-1

## Chemical Properties

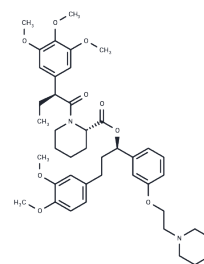
CAS No. : 914805-33-7

Formula: C42H56N2O10

Molecular Weight: 748.9

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Shield-1 is a specific, high-affinity, and cell-permeable ligand for FK506-binding protein 12 (FKBP) and reverses instability by binding to mutant FKBP (mtFKBP), allowing conditional expression of mtFKBP fusion proteins.
Targets(IC50)	Others,FKBP
In vitro	<b>METHODS:</b> Transfected cells with mtFKBP-TRPV5 were treated with Shield-1 (1 $\mu$ M, 24 hours), the ligand was washed out, and the mtFKBP-TRPV5 signal was subsequently measured at different time points. <b>RESULTS</b> mtFKBP-TRPV5 protein levels decreased rapidly with a half-life (t) of $2.53 \pm 0.59$ hours. [1]

## Solubility Information

Solubility	DMSO: 250 mg/mL (333.82 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: 5 mg/mL (6.68 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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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.3353 mL	6.6765 mL	13.3529 mL
5 mM	0.2671 mL	1.3353 mL	2.6706 mL
10 mM	0.1335 mL	0.6676 mL	1.3353 mL
50 mM	0.0267 mL	0.1335 mL	0.2671 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

Schoeber JP, et al. Conditional fast expression and function of multimeric TRPV5 channels using Shield-1. *Am J Physiol Renal Physiol.* 2009 Jan;296(1):F204-11.

Li S, et al. Effects of Shield1 on the viral replication of varicella-zoster virus containing FKBP-tagged ORF4 and 48. *Mol Med Rep.* 2018 Jan;17(1):763-770.

Banaszynski LA, et al. A rapid, reversible, and tunable method to regulate protein function in living cells using synthetic small molecules. *Cell.* 2006 Sep 8;126(5):995-1004.

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