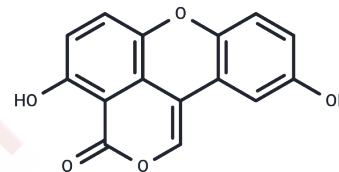


## Sparstolonin B

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 1259330-61-4  |
| Formula:          | C <sub>15</sub> H <sub>8</sub> O <sub>5</sub>   |
| Molecular Weight: | 268.22  |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |



## Biological Description

|               |  |
|---------------|--|
| Description   | Sparstolonin B, a selective TLR2 and TLR4 antagonist, is an isocoumarin compound isolated from the tubers of Sparganium stoloniferum and Scirpus yagara with anti-HIV, anticancer, antitumour and anti-inflammatory activities, inhibits selective Toll-like receptors, inhibits free fatty acids It inhibits selective Toll-like receptors, inhibits free fatty acid palmitate-induced chondrocyte inflammation and attenuates post-traumatic arthritis in obese mice, and inhibits lipopolysaccharide-induced inflammation in 3T3-L1 adipocytes, which can be used for validation and mammary carcinoma studies. |
| Targets(IC50) | HIV Protease,TLR   |
| In vitro      | Sparstolonin B (1-20 µM; 2-4 days) inhibits cell growth and viability of neuroblastoma cells[3].Sparstolonin B inhibits TLR ligand-induced cytokine expression in mouse macrophages. Sparstolonin B inhibits MyD88 recruitment to TLR4 and TLR2[1]. Sparstolonin B generates reactive oxygen species (ROS) in neuroblastoma cells. Sparstolonin B reduces expression of N-myc in neuroblastoma cells[3].<br>Cell Viability Assay[3]<br>Cell Line: SH-SY5Y, IMR-32, NGP, SKNF-1 and SK-N-BE (2) cells   |
| In vivo       | Sparstolonin B (100 µg/mouse; i.p.) suppresses LPS-induced inflammation in 5-6-week-old male C57Bl/6 mice (18-20 g body weight)[1].  |

## Solubility Information

|            |  |
|------------|--|
| Solubility | DMSO: 5 mg/mL (18.64 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

### Preparing Stock Solutions

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|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 3.7283 mL | 18.6414 mL | 37.2828 mL |
| 5 mM  | 0.7457 mL | 3.7283 mL  | 7.4566 mL  |
| 10 mM | 0.3728 mL | 1.8641 mL  | 3.7283 mL  |
| 50 mM | 0.0746 mL | 0.3728 mL  | 0.7457 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

Liang Q, et al. Characterization of sparstolonin B, a Chinese herb-derived compound, as a selective Toll-like receptor antagonist with potent anti-inflammatory properties. *J Biol Chem.* 2011;286(30):26470-26479.

Deng X, et al. The Chinese herb-derived Sparstolonin B suppresses HIV-1 transcription. *Virology.* 2015;12:108. Published 2015 Jul 25.

Kumar A, et al. Sparstolonin B, a novel plant derived compound, arrests cell cycle and induces apoptosis in N-myc amplified and N-myc nonamplified neuroblastoma cells [published correction appears in *PLoS One.* 2016;11(7):e0159082]. *PLoS One.* 2014;9(5):e96.

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