
Product Data Sheet

Product Name: Sparstolonin B

Cat. No.: GC60344

Chemical Properties

Cas. No. 1259330-61-4

SMILES O=C1OC=C2C3=C(OC4=C2C1=C(O)C=C4)C=CC(O)=C3Formula C₁₅H₈O₅

M.Wt 268.22

Solubility DMSO : 10 mg/mL (Need ultrasonic and warming)

Storage

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Sparstolonin B is an isocoumarin that has been found in *Spaganium stoloniferum* and has diverse biological activities.^{1,2,3,4} It inhibits increases in TNF- α , IL-6, and IL-1 β levels induced by the toll-like receptor 4 (TLR4) agonist LPS, TLR2 agonist Pam₃CSK₄ , or TLR2/6 agonist FSL-1 but not the TLR3 agonist poly(I:C) or TLR9 agonist ODN1668 in primary mouse macrophages when used at a concentration of 100 μ M.¹ Sparstolonin B (1-10 μ M) reduces HIV-1 p24 antigen levels in the culture supernatant of human peripheral blood mononuclear cells (PBMCs) infected with HIV-1, indicating inhibition of HIV replication.² It induces apoptosis, cell cycle arrest at the G₂/M phase, and production of reactive oxygen species (ROS) in SH-SY5Y neuroblastoma cells when used at a concentration of 10 μ M.³ Sparstolonin B (3 and 9 mg/kg) protects mice from lethal endotoxin shock.⁴

1.Liang, Q., Wu, Q., Jiang, J., et al.Characterization of sparstolonin B, a chinese herb-derived compound, as a selective toll-like receptor antagonist with potent anti-inflammatory propertiesJ. Biol. Chem.286(30)26470-26479(2011) 2.Deng, X., Zhang, Y.,

Caution: Product has not been fully validated for medical applications. For research use only.

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Jiang, F., et al. The chinese herb-derived sparstolonin B suppresses HIV-1 transcription *Virology* 512(2):108-115 (2015)

3. Kumar, A., Fan, D., Dipette, D.J., 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 *PLoS One* 9(5):e96343 (2014)

4. Liang, Q., Dong, S., Lei, L., et al. Protective effects of Sparstolonin B, a selective TLR2 and TLR4 antagonist, on mouse endotoxin shock *Cytokine* 75(2):302-309 (2015)

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