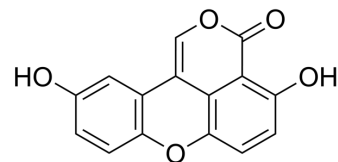


Sparstolonin B

| | | | | | | | | | | | | | |
|---------------------------|--|----------|-------|---------|--|-----|---------|------------|-------|----------|--|-------|---------|
| Cat. No.: | HY-116213 | | | | | | | | | | | | |
| CAS No.: | 1259330-61-4 | | | | | | | | | | | | |
| Molecular Formula: | C ₁₅ H ₈ O ₅ | | | | | | | | | | | | |
| Molecular Weight: | 268.22 | | | | | | | | | | | | |
| Target: | Toll-like Receptor (TLR); HIV | | | | | | | | | | | | |
| Pathway: | Immunology/Inflammation; Anti-infection | | | | | | | | | | | | |
| Storage: | <table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table> | Powder | -20°C | 3 years | | 4°C | 2 years | In solvent | -80°C | 6 months | | -20°C | 1 month |
| Powder | -20°C | 3 years | | | | | | | | | | | |
| | 4°C | 2 years | | | | | | | | | | | |
| In solvent | -80°C | 6 months | | | | | | | | | | | |
| | -20°C | 1 month | | | | | | | | | | | |



SOLVENT & SOLUBILITY

| | | | | | |
|---|---|--------------------------|--------------|------------|------------|
| In Vitro | DMSO : 10 mg/mL (37.28 mM; Need ultrasonic and warming) | | | | |
| | | Solvent Concentration | Mass 1 mg | 5 mg | 10 mg |
| | Preparing Stock Solutions | 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 | |
| Please refer to the solubility information to select the appropriate solvent. | | | | | |
| In Vivo | 1. Add each solvent one by one: 0.5% CMC-Na/saline water Solubility: 5 mg/mL (18.64 mM); Suspended solution; Need ultrasonic | | | | |

BIOLOGICAL ACTIVITY

| | | | |
|-------------------------------------|--|------|-------|
| Description | Sparstolonin B acts as a selective TLR2 and TLR4 antagonist and selectively blocks TLR2- and TLR4-mediated inflammatory signaling. Sparstolonin B has anti-HIV and anticancer activities ^{[1][2]} . | | |
| IC₅₀ & Target | TLR2 | TLR4 | HIV-1 |
| 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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[3] | | |

| | |
|------------------|--|
| Cell Line: | SH-SY5Y, IMR-32, NGP, SKNF-1 and SK-N-BE(2) cells |
| Concentration: | 1 μ M, 5 μ M, 10 μ M or 20 μ M |
| Incubation Time: | 2-4 days |
| Result: | Effectively and dose-dependently inhibits the viability of all neuroblastoma cell lines after 2 days (SH-SY5Y and IMR-32), 3 days (NGP cells) or 4 days (SKNF-1 and SK-N-BE(2) cells) treatment. |

In Vivo

Sparstolonin B (100 μ g/mouse; i.p.) suppresses LPS-provoked inflammation in mice^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|-----------------|--|
| Animal Model: | 5-6-week-old male C57Bl/6 mice (body weight 18-20 g) ^[1] |
| Dosage: | 100 μ g/mouse |
| Administration: | i.p. |
| Result: | Significantly lower TNF α and IL-1 β expression levels in LPS-induced sepsis mouse model. |

CUSTOMER VALIDATION

- J Nanobiotechnology. 2024 Dec 18;22(1):759.
- Biofactors. 2021 Aug 2.
- Exp Cell Res. 2022 May 18;417(1):113214.
- World J Surg Oncol. 2022 Aug 25;20(1):266.

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REFERENCES

[1]. 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.

[2]. Deng X, et al. The Chinese herb-derived Sparstolonin B suppresses HIV-1 transcription. Virol J. 2015;12:108. Published 2015 Jul 25.

[3]. 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):e96343. Published 2014 May 1.

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

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