PRODUCT INFORMATION



SP-8356

Item No. 37481

| CAS Registry No.: | 1454885-45-0 | |
|--|--------------------------------------|---|
| Formal Name: | (1S,5R)-4-[(1E)-2-(3,4-dihydroxy-5- | <u> </u> |
| | methoxyphenyl)ethenyl]-6,6-dimethyl- | |
| | bicyclo[3.1.1]hept-3-en-2-one | OH |
| MF: | $C_{18}H_{20}O_4$ | |
| FW: | 300.4 | |
| Purity: | ≥98% | — С С С С С С С С С С С С С С С С С С С |
| UV/Vis.: | λ _{max} : 266, 381 nm | |
| Supplied as: | A solid | |
| Storage: | -20°C | 0 |
| Stability: | ≥4 years | |
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Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SP-8356 is supplied as a solid. A stock solution may be made by dissolving the SP-8356 in the solvent of choice, which should be purged with an inert gas. SP-8356 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SP-8356 in ethanol is approximately 10 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Description

SP-8356 is a derivative of (1S)-(-)-verbenone and an inhibitor of CD147, also known as extracellular matrix metalloproteinase (MMP) inducer (EMMPRIN) and previously known as tumor cell-derived collagenase stimulatory factor (TCSF).^{1,2} It inhibits the dimerization of CD147 and the protein-protein interaction between CD147 and its ligand cyclophilin A. SP-8356 (10 μ M) decreases recombinant human CD147-induced migration of A-10 vascular smooth muscle cells (VSMCs) and reduces cyclophilin A-induced increases in MMP-9 activity in, and adhesion of, isolated rat monocyte-derived macrophages. It also prevents glucose-oxygen deprivation-induced increases in reactive oxygen species (ROS) and lactate dehydrogenase (LDH) release in primary rat cortical neurons in an in vitro model of ischemia when used at a concentration of 10 μ M.³ SP-8356 (5 μ M) inhibits the migration and invasion of MDA-MB-231 breast cancer cells.⁴ In vivo, SP-8356 (50 mg/kg in the drinking water) decreases plaque size in an ApoE^{-/-} mouse model of atherosclerosis induced by partial carotid artery ligation and a high-fat diet.²

References

- 1. Pahk, K., Noh, H., Joung, C., et al. A novel CD147 inhibitor, SP-8356, reduces neointimal hyperplasia and arterial stiffness in a rat model of partial carotid artery ligation. J. Transl. Med. 17(1), 274 (2019).
- 2. Pahk, K., Joung, C., Song, H.Y., et al. SP-8356, a novel inhibitor of CD147-cyclophilin A interactions, reduces plaque progression and stabilizes vulnerable plaques in apoE-deficient mice. Int. J. Mol. Sci. 21(1), 95 (2019).
- 3. Ju, C., Song, S., Hwang, S., et al. Discovery of novel (15)-(-)-verbenone derivatives with anti-oxidant and anti-ischemic effects. Bioorg. Med. Chem. Lett. 23(19), 5421-5425 (2013).
- Mander, S., Kim, D.H., Nguyen, H.T., et al. SP-8356, a (1S)-(-)-verbenone derivative, exerts in vitro and 4. in vivo anti-breast cancer effects by inhibiting NF-κB signaling. Sci. Rep. 9(1), 6595 (2019).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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