

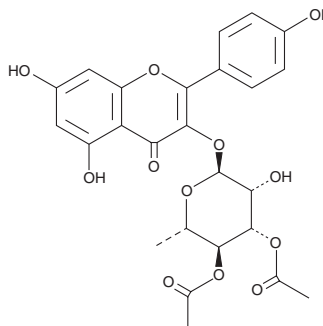
PRODUCT INFORMATION



SL 0101-1

Item No. 11704

CAS Registry No.: 77307-50-7
Formal Name: 3-[(3,4-di-O-acetyl-6-deoxy- α -L-mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
MF: C₂₅H₂₄O₁₂
FW: 516.5
Purity: \geq 98%
Stability: \geq 2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max} : 266, 322 nm



Laboratory Procedures

For long term storage, we suggest that SL 0101-1 be stored as supplied at -20°C. It should be stable for at least two years.

SL 0101-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the SL 0101-1 in the solvent of choice. SL 0101-1 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of SL 0101-1 in these solvents is approximately 0.16 and 0.33 mg/ml, respectively.

SL 0101-1 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

The p90 ribosomal S6 kinases (RSK) 1-4 are downstream members of the extracellular signal-regulated kinase (ERK)/MAPK cascade. SL 0101-1 is a kaempferol glycoside, isolated from the tropical plant *F. refracta*, that selectively inhibits RSK2 with an IC₅₀ value of 89 nM ($K_i = 1 \mu\text{M}$) without interfering with upstream activators of RSK, including ERK, MEK, EGFR, and PKC.¹ At 100 μM , SL 0101-1 inhibits the proliferation of MCF-7 breast cancer cells, arresting cells in the G₁ phase of the cell cycle.¹ SL 0101-1 has been used to characterize the intracellular signaling events associated with angiotensin II-induced tyrosine kinase activation with a concentration of 30 μM attenuating angiotensin II-induced cell proliferation.²

References

1. Smith, J.A., Poteet-Smith, C.E., Xu, Y., *et al.* Identification of the first specific inhibitor of p90 ribosomal S6 kinase (RSK) reveals an unexpected role for RSK in cancer cell proliferation. *Cancer Res.* **65**(3), 1027-1034 (2005).
2. Godeny, M.D. and Sayeski, P.P. ERK1/2 regulates ANG II-dependent cell proliferation via cytoplasmic activation of RSK2 and nuclear activation of elk1. *Am. J. Physiol. Cell Physiol.* **291**, C1308-C1317 (2006).

WARNING

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

SAFETY 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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