

Product Data Sheet

Product Name: Resveratrol

Cat. No.: GC14553

Chemical Properties

Cas. No. 501-36-0

Chemical Name 5-[(E)-2-(4-hydroxyphenyl)ethenyl]benzene-1,3-diol

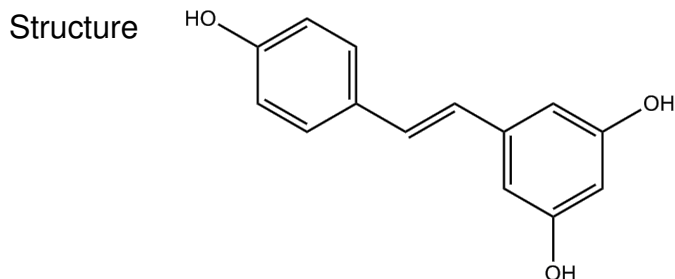
SMILES C1=CC(=CC=C1C=CC2=CC(=CC(=C2)O)O)O

Formula $C_{14}H_{12}O_3$ M.Wt 228.24

Solubility $\geq 100\text{mg/mL}$ in DMSO ; $\geq 50\text{mg/mL}$ in EtOH Storage Store at -20°C

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.



Protocol

Cell experiment [1]:

Cell lines ALVA-41, PC-3, and BPH-1 cells

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

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Preparation Method	For cell viability studies, ALVA-41, PC-3, and BPH-1 cells were treated for 24 h with 10 µmol/L and 100 µmol/L concentrations of resveratrol or EGCG.
Reaction Conditions	10, 100 µM for 24 hours
Applications	Resveratrol at low doses (10 µmol/L) induced a proliferative response in ALVA-41 and BPH-1 cells at 24 h, which was not evident in PC-3 cells. However, at a higher dose (100 µmol/L), resveratrol produced a significant toxicity in prostate cancer cells, although the effect on ALVA-41 cells was relatively greater than on PC-3 cells.
Animal experiment [2]:	
Animal models	CB17SC mice model injected with LAPC-4 cells
Preparation Method	In the primary LAPC-4 study, mice were fed no resveratrol (control), 50 mg/kg/day resveratrol (RV50), or 100 mg/kg/day resveratrol (RV100).
Dosage form	Fed in diet, 50 mg/kg/day and 100 mg/kg/day
Applications	In the LAPC-4 study, RV50 significantly decreased survival while RV100 did not significantly change survival.

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References:

- [1]: Ahmad K A, Harris N H, Johnson A D, et al. Protein kinase CK2 modulates apoptosis induced by resveratrol and epigallocatechin-3-gallate in prostate cancer cells[J]. Molecular cancer therapeutics, 2007, 6(3): 1006-1012.
- [2]: Klink J C, Tewari A K, Masko E M, et al. Resveratrol worsens survival in SCID mice with prostate cancer xenografts in a cell@line specific manner, through paradoxical effects on oncogenic pathways[J]. The Prostate, 2013, 73(7): 754-762.

Background

Resveratrol (trans-Resveratrol; SRT501) is a phytoalexin. Resveratrol is a potent reducing agent, and can prevent carcinogenesis due to its anti-oxidant abilities [1]. Resveratrol has a broad range of targets, including cyclooxygenase (e.g., COX, IC₅₀=1.1 μM), lipoxygenase (LOC, IC₅₀=2.7 μM), STAT3 (IC₅₀=20 μM), and other proteins [2,3].

Resveratrol treatment is found to exert its effect on renal cell carcinoma (RCC) proliferation, migration and invasion in a concentration dependent manner through inactivation of the Akt and ERK1/2 signaling pathways [4]. In CaCo-2 cells, treatment with 25 μM Resveratrol has shown 70% growth inhibition due to S/G2 phase arrest [5]. Resveratrol treatment lead to inhibited invasion and metastasis of colorectal cancer-derived cell lines LoVo and HCT116 by suppressing the Wnt/β-catenin signaling mediated target genes of c-Myc, MMP-7, and MALT-1 [6].

Resveratrol is shown to be effective against breast cancer metastasis to lungs in mice by its inhibitory effect on Stat3 mediated signaling [7]. Resveratrol treatment reduced size and number of tumor spheres in renal carcinoma stem cells xenograft mice model [8]. Resveratrol treatment reduced Epithelial to mesenchymal transition (EMT) of glioblastoma U87 xenografted mice models [9].

References:

- [1]. Bhaskara V K, Mittal B, Mysorekar V V, et al. Resveratrol, cancer and cancer stem cells: A review on past to future[J]. Current Research in Food Science, 2020, 3: 284-295.
- [2]. Calamini B, Ratia K, Malkowski M G, et al. Pleiotropic mechanisms facilitated by resveratrol and its metabolites[J]. Biochemical Journal, 2010, 429(2): 273-282.

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- [3]. Pirola L, Fr?jd? S. Resveratrol: one molecule, many targets[J]. IUBMB life, 2008, 60(5): 323-332.
- [4]. Zhao Y, Tang H, Zeng X, et al. Resveratrol inhibits proliferation, migration and invasion via Akt and ERK1/2 signaling pathways in renal cell carcinoma cells[J]. Biomedicine & Pharmacotherapy, 2018, 98: 36-44.
- [5]. Schneider Y, Vincent F, Duranton B, et al. Anti-proliferative effect of resveratrol, a natural component of grapes and wine, on human colonic cancer cells[J]. Cancer letters, 2000, 158(1): 85-91.
- [6]. Ji Q, Liu X, Fu X, et al. Resveratrol inhibits invasion and metastasis of colorectal cancer cells via MALAT1 mediated Wnt/ β -catenin signal pathway[J]. PloS one, 2013, 8(11): e78700.
- [7]. Lee-Chang C, Bodogai M, Martin-Montalvo A, et al. Inhibition of breast cancer metastasis by resveratrol-mediated inactivation of tumor-evoked regulatory B cells[J]. The Journal of Immunology, 2013, 191(8): 4141-4151.
- [8]. Ji Q, Liu X, Fu X, et al. Resveratrol inhibits invasion and metastasis of colorectal cancer cells via MALAT1 mediated Wnt/ β -catenin signal pathway[J]. PloS one, 2013, 8(11): e78700.
- [9]. Song Y, Chen Y, Li Y, et al. Resveratrol suppresses epithelial-mesenchymal transition in GBM by regulating Smad-dependent signaling[J]. BioMed Research International, 2019, 2019.

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