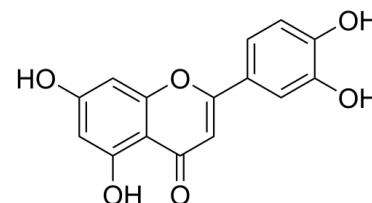


Data Sheet

Product Name:	Luteolin
Cat. No.:	CS-4611
CAS No.:	491-70-3
Molecular Formula:	C ₁₅ H ₁₀ O ₆
Molecular Weight:	286.24
Target:	Apoptosis; Autophagy; Endogenous Metabolite; Keap1-Nrf2
Pathway:	Apoptosis; Autophagy; Metabolic Enzyme/Protease; NF-κB
Solubility:	DMSO : ≥ 100 mg/mL



BIOLOGICAL ACTIVITY:

Luteolin (Luteoline), a flavanoid compound, is a potent **Nrf2** inhibitor. Luteolin has anti-inflammatory, anti-cancer properties, including the induction of **apoptosis** and cell cycle arrest, and the inhibition of metastasis and angiogenesis, in several cancer cell lines, including human non-small lung cancer cells^{[1][2][3]}. *In Vitro*: Luteolin (0-160 μM; 24 hours; NCI-H460 cells) treatment inhibits the viability of NCI-H460 cells in a concentration-dependent manner^[1].

Luteolin (20-80 μM; 24 hours; NCI-H460 cells) treatment causes an accumulation of cells in the S phase^[1].

Luteolin (320-580 μM; 48 hours; NCI-H460 cells) treatment induces apoptosis^[1].

Luteolin (20-80 μM; 24 hours; NCI-H460 cells) treatment increases the protein expression levels of apoptotic regulatory proteins, including the Bax/Bcl-2 ratio, in a concentration-dependent manner, however, only 80 μM Luteolin inhibits the expression of Bad. Luteolin also decreases the expression of Sirt1 in the NCI-H460 cell line in a concentration-dependent manner^[1]. *In Vivo*: Luteolin (10-100 mg/kg; oral gavage; daily; for 12 weeks; adult male Wistar rats) has an antioxidant effect and can also protect against non-alcoholic steatohepatitis through targeting the pro-inflammatory IL-1 and IL-18 pathways in rats with a high carbohydrate/high fat diet [2].

References:

- [1]. Ma L, et al. Luteolin exerts an anticancer effect on NCI-H460 human non-small cell lung cancer cells through the induction of Sirt1-mediated apoptosis. Mol Med Rep. 2015 Sep;12(3):4196-4202.
- [2]. Abu-Elsaad N, et al. Protection against nonalcoholic steatohepatitis through targeting IL-18 and IL-1α by luteolin. Pharmacol Rep. 2019 Aug;71(4):688-694.
- [3]. Xiuwen Tang, et al. Luteolin inhibits Nrf2 leading to negative regulation of the Nrf2/ARE pathway and sensitization of human lung carcinoma A549 cells to therapeutic drugs. Free Radic Biol Med. 2011 Jun 1;50(11):1599-609.

CAIndexNames:

4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-

SMILES:

O=C1C=C(C2=CC=C(O)C(O)=C2)OC3=CC(O)=CC(O)=C13

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

Tel: 610-426-3128

Fax: 888-484-5008

E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite F, Monmouth Junction, NJ 08852, USA