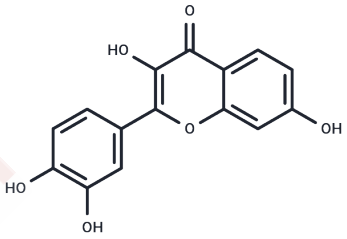
Data Sheet (Cat.No.T2879)

TargetMol

Fisetin

Chemical Properties



CAS No. : 528-48-3

Formula: C15H10O6

Molecular Weight: 286.24

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Fisetin belongs to a group of natural flavonols with a variety of biological activities, including anti-inflammatory, antioxidant, anti-tumor, anti-aging and neuroprotective effects.
Targets(IC50)	PPAR,Sirtuin,TNF
In vitro	**METHODS**: Human pancreatic cancer cells PANC-1 were treated with Fisetin (25-400 μM) for 24-48 h. Cell viability was measured by CCK-8 assay. **RESULTS**: Low concentrations of Fisetin (25-50 μM) did not significantly inhibit the viability of PANC-1 cells, and high concentrations inhibited it. [1] **METHODS**: HeLa cells were treated with Fisetin (20-50 μM) for 24-48 h. Cell cycle was detected by Flow cytometry. **RESULTS**: Cells treated with 20/30/50 μM Fisetin resulted in a high accumulation of G2/M phase cells. The proportion of G2/M-arrested cells increased from 10.1% to 16.2%, 18.9% and 25.1%, respectively, at 24 h, whereas the proportion of G2/M-blocked cells increased to 30.9%, 36.2% and 56.2%, respectively, at 48 h. Meanwhile, at 48 h, 50 μM of Fisetin put a large proportion of cells in Go/G1 phase. [2]
In vivo	**METHODS**: To detect anti-tumor activity in vivo, Fisetin (300 mg/kg) was administered intraperitoneally every two days for 20 days to BALB/c nude mice bearing PANC-1 xenografts. **RESULTS**: Tumor size was significantly reduced in Fisetin-treated mice. proliferation-associated protein proliferating cell nuclear antigen (PCNA) was significantly reduced in the Fisetin-treated group. fisetin treatment reduced the expression of proteins associated with cell growth and proliferation, including PCNA, Ki67, and phosphorylated histone H3. [1]

Solubility Information

Solubility	DMSO: 28.6 mg/mL (99.92 mM),Sonication is recommended. Ethanol: 2.9 mg/mL (10.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.87 mg/mL (10.03 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4936 mL	17.4679 mL	34.9357 mL
5 mM	0.6987 mL	3.4936 mL	6.9871 mL
10 mM	0.3494 mL	1.7468 mL	3.4936 mL
50 mM	0.0699 mL	0.3494 mL	0.6987 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Jia S, et al. Fisetin induces autophagy in pancreatic cancer cells via endoplasmic reticulum stress- and mitochondrial stress-dependent pathways. Cell Death Dis. 2019 Feb 13;10(2):142. doi: 10.1038/s41419-019-1366-y. Erratum in: Cell Death Dis. 2024 Jan 29;15(1):94.

Zhang H, Zhang H, Wu X, et al. Fisetin alleviates sepsis-induced multiple organ dysfunction in mice via inhibiting p38 MAPK/MK2 signaling. Acta Pharmacologica Sinica. 2020, 41(10): 1348-1356.

Afroze N, et al. Fisetin Deters Cell Proliferation, Induces Apoptosis, Alleviates Oxidative Stress and Inflammation in Human Cancer Cells, HeLa. Int J Mol Sci. 2022 Feb 1;23(3):1707.

Liang Y, Xu Z, Wu X, et al. Inhibition of hyperpolarization-activated cyclic nucleotide-gated channels with natural flavonoid quercetin. Biochemical and Biophysical Research Communications. 2020

Kim SC, et al. Biochem Biophys Res Commun. 2015 Nov 27;467(4):638-44.

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Zhang H, Zhang H, Wu X, et al. Fisetin alleviates sepsis-induced multiple organ dysfunction in mice via inhibiting p38 MAPK/MK2 signaling[J]. Acta Pharmacologica Sinica. 2020, 41(10): 1348-1356.