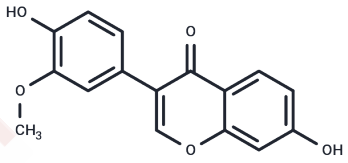
Data Sheet (Cat.No.TN1254)

TargetMol

3'-Methoxydaidzein

Chemical Properties



CAS No. : 21913-98-4

Formula: C16H12O5

Molecular Weight: 284.26

Storage: Store at low temperature
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	3'-Methoxydaidzein is a dual isoflavone and Sodium Channel inhibitor. 3'-Methoxydaidzein inhibited NaV1.7, NaV1.8 and NaV1.3 with IC50 of 181 nM, 397 nM and 505 nM, respectively. 3'-Methoxydaidzein was specific for collagen-induced platelet aggregation with IC50 values of 12.3 and 61.5μM, respectively. 3'-Methoxydaidzein acts as an analgesic by inhibiting voltage-gated sodium channels. 3'-Methoxydaidzein showed antioxidant activity and antiplatelet aggregation activity.
Targets(IC50)	Sodium Channel
In vitro	3'-Methoxydaidzein, their antioxidant activities were investigated and compared with butylated hydroxyluene (BHT) and α±-tocopherol. The results showed that 3'-Methoxydaidzein had antioxidant activity. When the individual components (0.02%) were mixed with 0.02% BHT, or 0.02% α±-tocopherol, their protection factor was increased, but there was no synergistic effect. When the individual component had 4 ppm added Fe3+, 3'-Methoxydaidzein had antioxidant activity. Their antioxidant activities were tested by an oxidative stability instrument (OSI) at 100°C.[1]
In vivo	3'-Methoxydaidzein shows strong analgesic potential without inducing addiction through inhibiting subtypes NaV1.7, NaV1.8 and NaV1.3 with the IC50 of 181 ± 14, 397 ± 26, and 505 ± 46 nmol·L-1, respectively, providing a promising compound or parent structure for the treatment of pain pathologies. This study reveals a pain-alleviating mechanism of dietary isoflavones and may provide a convenient avenue to alleviate pain.[2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5179 mL	17.5895 mL	35.1791 mL
5 mM	0.7036 mL	3.5179 mL	7.0358 mL
10 mM	0.3518 mL	1.759 mL	3.5179 mL
50 mM	0.0704 mL	0.3518 mL	0.7036 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

Wang W, et al. Antioxidant activities of natural phenolic components from Dalbergia odorifera T. ChenFood Chem. 2000;71(1):45-49.

Xu RJ, et al. 3'-Methoxydaidzein exerts analgesic activity by inhibiting voltage-gated sodium channels. Chin J Nat Med. 2019;17(6):413-423.

Chang LC, et al. Activity-guided isolation of constituents of Tephrosia purpurea with the potential to induce the phase II enzyme, quinone reductase. J Nat Prod. 1997;60(9):869-873.