Kuromanin chloride

Cat. No.: HY-N0640

CAS No.: 7084-24-4

Molecular Formula: $C_{21}H_{21}ClO_{11}$

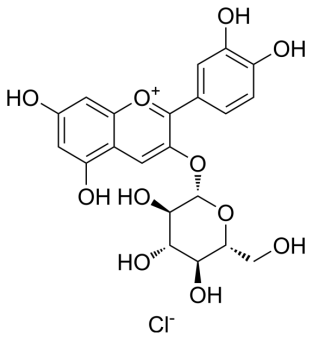
Molecular Weight: 484.84

Target: CD38

Pathway: Immunology/Inflammation

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (51.56 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.0625 mL	10.3127 mL	20.6254 mL
	5 mM	0.4125 mL	2.0625 mL	4.1251 mL
	10 mM	0.2063 mL	1.0313 mL	2.0625 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Kuromanin chloride (Chrysontemin) is derived from mulberry leaves and has the effect of increasing blood sugar concentration and maintaining lipid metabolism balance to reduce obesity. Kuromanin chloride can inhibit CD38 enzymatic activities[1][2][3].

In Vitro

Kuromanin chloride (5 μg/mL) reduces the expression of Ad36 E1A viral gene in 3T3L1 cells infected with 4 MOI of Ad36[1].
Kuromanin chloride (100 μM, 24 h) protects cerebellar granule neurons from nitric oxide (NO)-induced apoptosis[2].
Kuromanin chloride (30 and 100 μM, 30 min) inhibits enzymatic activities of CD38, and blocks chronic lymphocytic leukemia (CLL) chemotaxis in CD38+ CLL cells (a fluorimetric assay based on cGDPR generation from NGD)[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- LWT-FOOD SCI TECHNOL . 2021, 111791.
- Inflammation. 2020 Jun;43(3):1088-1096.
- Drug Des Dev Ther. 2020 Aug 19;14:3385-3391.
- Can J Physiol Pharmacol. 2020 Oct 13.
- SSRN. 2023 Oct 11.

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REFERENCES

[1]. Winter AN, et al. Chemical basis for the disparate neuroprotective effects of the anthocyanins, callistephin and kuromanin, against nitrosative stress. Free Radic Biol Med. 2017 Feb;103:23-34.

[2]. Vaisitti T, et al. The enzymatic activities of CD38 enhance CLL growth and trafficking: implications for therapeutic targeting. Leukemia. 2015 Feb;29(2):356-68.

[3]. Ha -Na Na, et al. Reduction of adenovirus 36-induced obesity andin?ammation by mulberry extract. Microbiol Immunol 2014; 58: 303–306

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