Prunin

Cat. No.: HY-N1549

CAS No.: 529-55-5

Molecular Formula: $C_{21}H_{22}O_{10}$

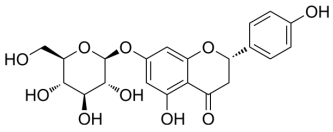
Molecular Weight: 434.39

Target: Enterovirus; Phosphatase

Pathway: Anti-infection; Metabolic Enzyme/Protease

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (230.21 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3021 mL	11.5104 mL	23.0208 mL
	5 mM	0.4604 mL	2.3021 mL	4.6042 mL
	10 mM	0.2302 mL	1.1510 mL	2.3021 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: ≥ 2.5 mg/mL (5.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Prunin is a potent inhibitor of human enterovirus A71 (HEVA71). Prunin shows strong inhibitory activity against protein tyrosine phosphatase 1B (PTP1B), with an IC_{50} of 5.5 μM[1][2].

In Vitro

Prunin exhibited dose-dependent inhibitory activity against ONOO--mediated tyrosine nitration and stimulated glucose uptake by decreasing PTP1B expression level in insulin-resistant HepG2 cells. Prunin shows significant inhibitory activity against α-glucosidase, with an IC_{50} of 317 ± 2.12 μM[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gunaseelan S, et al. Prunin suppresses viral IRES activity and is a potential candidate for treating enterovirus A71 infection. Sci Transl Med. 2019 Oct 30;11(516). pii: eaar5759.

[2]. Jung HA, et al. Prunin is a highly potent flavonoid from Prunus davidiana stems that inhibits protein tyrosine phosphatase 1B and stimulates glucose uptake in insulin-resistant HepG2 cells. Arch Pharm Res. 2017 Jan;40(1):37-48.

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