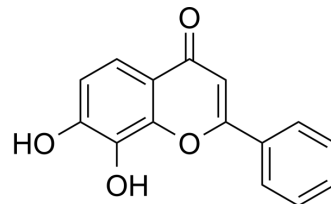


7,8-Dihydroxyflavone

Cat. No.:	HY-W013372
CAS No.:	38183-03-8
Molecular Formula:	C ₁₅ H ₁₀ O ₄
Molecular Weight:	254.24
Target:	Trk Receptor; Apoptosis
Pathway:	Neuronal Signaling; Protein Tyrosine Kinase/RTK; Apoptosis
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 100 mg/mL (393.33 mM) * "≥" means soluble, but saturation unknown.					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	3.9333 mL	19.6665 mL	39.3329 mL
			5 mM	0.7867 mL	3.9333 mL	7.8666 mL
			10 mM	0.3933 mL	1.9666 mL	3.9333 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 (9.83 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	7,8-Dihydroxyflavone is a potent and selective TrkB agonist that mimics the physiological actions of Brain-derived neurotrophic factor (BDNF). Displays therapeutic efficacy toward various neurological diseases ^[1] .
IC ₅₀ & Target	TrkB ^[1]
In Vitro	7,8-Dihydroxyflavone (500 nM) protects the primary cortical neurons and locus coeruleus (LC) neurons from Aβ-induced toxicity and promotes dendritic growth and synaptogenesis ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

7,8-Dihydroxyflavone (5 mg/kg/day) prevents synaptic loss and memory deficits in a mouse model of Alzheimer's Disease^[1].

Administration of 7,8- dihydroxyflavone to mice activates TrkB in the brain, inhibits kainic acid-induced toxicity, decreases infarct volumes in stroke in a TrkBdependent manner, and is neuroprotective in an animal model of Parkinson disease^[2].

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

CUSTOMER VALIDATION

- Mol Psychiatry. 2021 Oct 12.
- J Agric Food Chem. 2021 Nov 4.
- Eur J Pharmacol. 2022 Nov 22;175420.
- Drug Des Dev Ther. 2021 Mar 30;15:1409-1422.
- Int J Med Sci. 2022 Jan 1;19(1):13-24.

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REFERENCES

[1]. Zhang Z, et al. 7,8-dihydroxyflavone prevents synaptic loss and memory deficits in a mouse model of Alzheimer's disease. Neuropsychopharmacology. 2014 Feb;39(3):638-50.

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

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