



## Product Specification Sheet

**Product Name:** 7,8-Dihydroxyflavone

**Catalog Number:** C7181-10 (powder)

**Package Size:** 10 mg

**Technical information:**

Chemical Formula: C<sub>15</sub>H<sub>10</sub>O<sub>4</sub>

CAS #: 38183-03-8

Molecular Weight: 254.24

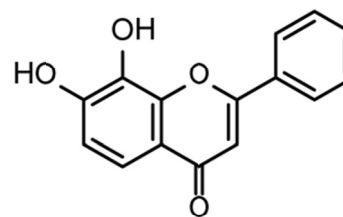
Purity: >98%

Formulation: White solid

Solubility: Soluble in DMSO up to 100 mM

Chemical Name: 7,8-dihydroxy-2-phenyl-4H-chromen-4-one

Storage: Store solid powder at 4°C desiccated;  
Store DMSO solution at -20°C.



7,8-Dihydroxyflavone

**Handling:** • For C7181-10 (powder), add 3.93 mL of DMSO to make 10 mM solution.

**Biological Activity:** 7,8-Dihydroxyflavone binds to the extracellular domain of tyrosine kinase receptor B (K<sub>d</sub> = 320 nM) and activate the receptor activity. It inhibits glutamate-triggered apoptosis in hippocampal neurons in vitro and in vivo. Administration of 7,8-dihydroxyflavone to mice activated TrkB in the brain, inhibited kainic acid-induced toxicity, decreased infarct volumes in stroke in a TrkB-dependent manner, and was neuroprotective in an animal model of Parkinson disease. It also reverses memory deficits and BACE1 elevation in a mouse model of Alzheimer's Disease.

- Reference:**
1. Sung-Wuk Jang et al. A selective TrkB agonist with potent neurotrophic activities by 7,8-dihydroxyflavone. PNAS.USA. 2010; 107 268.
  2. Latha Devi et al. 7,8-Dihydroxyflavone, a Small-Molecule TrkB Agonist, Reverses Memory Deficits and BACE1 Elevation in a Mouse Model of Alzheimer's Disease. Neuropsychopharmacology advance online publication 7 September 2011.
  3. Zhang R et al. Preventive effect of 7,8-dihydroxyflavone against oxidative stress induced genotoxicity. Biol Pharm Bull. 2009;32(2):166-71
  4. Raul Andero et al. Effect of 7,8-Dihydroxyflavone, a Small-Molecule TrkB Agonist, on Emotional Learning. Am J Psychiatry 2011; 168:163-172.
  5. Xia Liu et al. A Synthetic 7,8-Dihydroxyflavone Derivative Promotes Neurogenesis and Exhibits Potent Antidepressant Effect. J. Med. Chem., 2010, 53 (23), pp 8274–8286.

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