

Salidroside Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Salidroside

Catalog No.: CFN99177

Cas No.: 10338-51-9

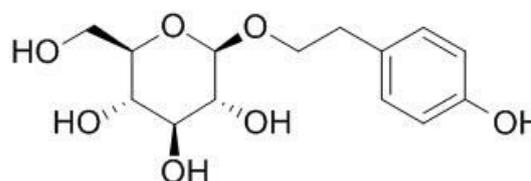
Purity: > 98%

M.F: C₁₄H₂₀O₇

M.W: 300.30

Physical Description: Powder

Synonyms: Rhodioloside; (2R,3S,4S,5R,6R)-2-(hydroxymethyl)-6-[2-(4-hydroxyphenyl)ethoxy]oxane-3,4,5-triol.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

[Source]

The herb of *Rhodiola rosea* L.

[Biological Activity or Inhibitors]

Salidroside, a phenylpropanoid glycoside isolated from *Rhodiola rosea* L, shows potent antioxidant property, has protective effects against oxidative stress-induced cell apoptosis, which might be a potential therapeutic agent for treating or preventing neurodegenerative diseases implicated with oxidative stress.^[1]

Salidroside has protective effects on hippocampal neurogenesis against streptozotocin-induced neural injury in the rat by scavenged intracellular ROS.^[2]

Salidroside exerts its protective effects through its antioxidative activity and the inhibition of caspase-3 activation and stress-induced intracellular Ca²⁺ rise in a dose-dependent manner, it is a protective agent in human erythrocytes against oxidative stress and may be a good adaptogen to enhance the body's resistance to stress and fatigue.^[3]

Salidroside treatment decreases neuronal vulnerability to stretch-induced injury in vitro, post-injury salidroside improves long-term behavioral and histological outcomes and reduces brain edema and apoptosis following TBI, at least partially via the PI3K/Akt signaling pathway.^[4]

Salidroside has shown cardioprotective effects in vivo, it has protective effect against hypoxia-induced cardiomyocytes necrosis and apoptosis by increasing HIF-1 α expression and subsequently up-regulating VEGF levels.^[5]

Salidroside attenuates beta amyloid-induced cognitive deficits via modulating oxidative stress and inflammatory mediators in rat hippocampus, it may have a protective effect against AD via modulating oxidative stress and inflammatory mediators.^[6]

Salidroside protects liver tissue from the oxidative stress elicited by D-galactosamine and lipopolysaccharide, the hepatoprotective mechanism of salidroside appear to be related to antioxidant activity and inhibition of hypoxia-inducible factor-1 α .^[7]

Salidroside protects against MPP⁺-induced apoptosis in PC12 cells by inhibiting the NO pathway.^[8]

[**Solvent**]

Pyridine, Ethanol, Methanol, Hot water, etc.

[**HPLC Method**]^[9]

Mobile phase: Methanol- H₂O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 275 nm.

[**Storage**]

2-8°C, Protected from air and light, refrigerate or freeze.

[**References**]

- [1] Zhang L, Yu H, Sun Y, *et al. Eur. J. Pharmacol.*, 2007, 564(1-3):18-25.
- [2] Qu Z, Zhou Y, Zeng Y, *et al. Plos One*, 2012, 7(1):e29641.
- [3] Qian E W, Ge D T, Kong S K. *J. Nat. Prod.*, 2012, 75(4):531-7.
- [4] K. SALOMON, G. ANTON, K. GRAF, *et al. Plos One*, 2012, 7(9):97-101.
- [5] Zhang J, Liu A, Hou R, *et al. Eur. J. Pharmacol.*, 2009, 607(1-3):6-14.
- [6] Zhang J, Zhen Y F, Pu-Bu-Ci-Ren, *et al. Behav. Brain Res.*, 2013, 244(244):70–81.
- [7] Wu Y L, Lian L H, Jiang Y Z. *J.Pharm. Pharmacol.*, 2009, 61(10):1375-82.
- [8] Li X, Ye X, Li X, *et al. Brain Res.*, 2011, 1382(9):9-18.
- [9] Wang W J, Huang L S. *Strait Pharmaceutical Journal*, 2014(9):40-2.

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