

3,4-Dihydroxybenzaldehyde Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: 3,4-Dihydroxybenzaldehyde

Catalog No.: CFN99450

Cas No.: 139-85-5

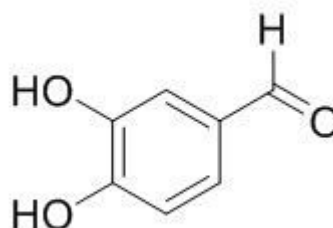
Purity: > 95%

M.F: C₇H₆O₃

M.W: 138.1

Physical Description: Powder

Synonyms: Protocatechualdehyde; Protocatechuic aldehyde; Rancinamycin IV.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Others.

[Source]

The heartwood of *Cassia garrettiana*.

[Biological Activity or Inhibitors]

3,4-Dihydroxybenzaldehyde, isolated from the outer skin of green banana, has been shown to inhibit the growth of *Gloeosporium musarum*, a fungus which causes ripe fruit rot in the banana.^[1]

3,4-Dihydroxybenzaldehyde can inhibit oxidative DNA damage and apoptosis via its antioxidant activity.^[2]

3,4-Dihydroxybenzaldehyde inhibits the phosphotransferase activity of CKII with IC₅₀ of about 783 µM, it may function by inhibiting oncogenic disease, at least in part, through the inhibition of CKII activity.^[3]

3,4-Dihydroxybenzaldehyde inhibits the H₂O₂-induced apoptosis of granulosa cells, promotes estradiol secretion in granulosa cells and enhanced the mRNA expression levels of steroidogenic factor 1, a promoter of key steroidogenic enzymes.^[4]

3,4-Dihydroxybenzaldehyde has tyrosinase inhibitory effect.^[5]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[6]

Mobile phase: MeOH-H₂O=80:20;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 254 nm.

[Storage]

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

[References]

[1] Mulvena D, Webb E C, Zerner B. *Phytochemistry*, 1969, 8(2):393-5.

[2] Jeong J, Hong S H. *Phytomed. Int. J. Phytother. Phytopharm.*, 2009, 16(1):85-94.

[3] Lee B H, Yoon S H, Kim Y S, *et al. Nat. Prod .Res.*, 2008, 22(22):1441-50.

[4] Kono R, Nomura S, Okuno Y, *et al. Acta Histochem. Cytoc.*, 2014, 47(3):103-12.

[5] Shin Dong-Soo, Paik Do-Hyeon, Yoon Do-Young, *et al. The Korea Journal of Herbology*, 2006, 21(2):1-7.

[6] Xia C Y, Chen L M, Hu W X. *Synthetic chemistry*, 2004, 12 (5): 484-6.

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