5-Hydroxyferulic acid

Cat. No.: HY-133068

CAS No.: 1782-55-4

Molecular Formula: $C_{10}H_{10}O_5$

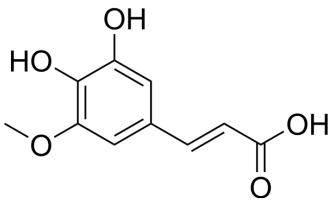
Molecular Weight: 210.18

Target: COMT; Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (475.78 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.7578 mL	23.7891 mL	47.5783 mL
	5 mM	0.9516 mL	4.7578 mL	9.5157 mL
	10 mM	0.4758 mL	2.3789 mL	4.7578 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

5-Hydroxyferulic acid is a hydroxycinnamic acid and is a metabolite of the phenylpropanoid pathway. 5-Hydroxyferulic acid is a precursor in the biosynthesis of sinapic acid and is also a COMT non-esterifed substrate[1][2][3].

IC_{50} & Target		
	Human Endogenous Metabolite	Human Endogenous Metabolite

In Vitro

The product of the alfalfa Caffeic acid/5-hydroxyferulic acid 3/5-O-methyltransferase (COMT) catalyzed methylation of 5-Hydroxyferulic acid is sinapic acid. 5-Hydroxyferulic acid O-methyltransferase activities (pkat mg-1 protein) in stem material from COMT downregulates transgenic alfalfa[1].

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

REFERENCES

[1]. K Parvathi, et al. Substrate Preferences of O-methyltransferases in Alfalfa Suggest New Pathways for 3-O-methylation of Monolignols. Plant J. 2001 Jan;25(2):193-202.

[2]. S Maury, et al. Tobacco O-methyltransferases Involved in Phenylpropanoid Metabolism. The Different Caffeoyl-Coenzyme A/5-hydroxyferuloyl-coenzyme A 3/5-O-methyltransferase and Caffeic acid/5-hydroxyferulic Acid 3/5-O-methyltransferase Classes Have Distinct Substrate Specificities and Expression Patterns. Plant Physiol. 1999 Sep;121(1):215-24.

[3]. Inoue, et al. Substrate Preferences of Caffeic acid/5-hydroxyferulic Acid 3/5-O-methyltransferases in Developing Stems of Alfalfa (Medicago Sativa L.). Arch Biochem Biophys. 2000 Mar 1;375(1):175-82.

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