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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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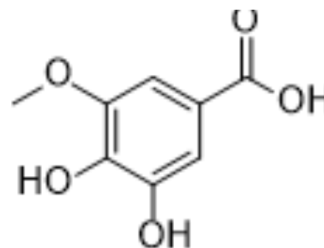
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3-O-Methylgallic acid

Cat. No.:	HY-N2009
CAS No.:	3934-84-7
Molecular Formula:	C ₈ H ₈ O ₅
Molecular Weight:	184.15
Target:	Apoptosis; Caspase
Pathway:	Apoptosis
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 : 50 mg/mL (271.52 mM; Need ultrasonic)
H₂O : 2 mg/mL (10.86 mM; ultrasonic and warming and heat to 60°C)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		5.4304 mL	27.1522 mL	54.3044 mL
	5 mM		1.0861 mL	5.4304 mL	10.8609 mL
	10 mM		0.5430 mL	2.7152 mL	5.4304 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 3.33 mg/mL (18.08 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (13.58 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (13.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3-O-Methylgallic acid (3,4-Dihydroxy-5-methoxybenzoic acid) is an anthocyanin metabolite and has potent antioxidant capacity. 3-O-methylgallic acid inhibits Caco-2 cell proliferation with an IC₅₀ value of 24.1 μM. 3-O-methylgallic acid also induces cell apoptosis and has anti-cancer effects^{[1][2][3]}.

In Vitro

3-O-Methylgallic acid (0-1100 μM, 72 h) inhibits Caco-2 cell proliferation with an IC₅₀ value of 24.1 μM^{[1][2]}.
3-O-Methylgallic acid (140 μM, 24 h) increases caspase-3 specific activity and increases mono and oligonucleosomes in Caco-

2 cells^[1].

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

Cell Viability Assay^{[1][2]}

Cell Line:	Caco-2 cells
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Concentration:	0-1100 μ M
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Incubation Time:	72 h
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Result:	Inhibited Caco-2 cell proliferation at low concentrations.
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Cell Cycle Analysis^[2]

Cell Line:	Caco-2 cells
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Concentration:	50 μ M
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Incubation Time:	24, 48, and 72 h
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Result:	Caused a significant ($P < 0.05$) arrest of the cell cycle at the G0/G1 checkpoint.
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REFERENCES

[1]. Gargouri OD, et al. Synthesis of 3-O-methylgallic acid a powerful antioxidant by electrochemical conversion of syringic acid. *Biochim Biophys Acta*. 2013 Jun;1830(6):3643-9.

[2]. Forester SC, et al. Gut metabolites of anthocyanins, gallic acid, 3-O-methylgallic acid, and 2,4,6-trihydroxybenzaldehyde, inhibit cell proliferation of Caco-2 cells. *J Agric Food Chem*. 2010 May 12;58(9):5320-7.

[3]. Forester SC, The anthocyanin metabolites gallic acid, 3-O-methylgallic acid, and 2,4,6-trihydroxybenzaldehyde decrease human colon cancer cell viability by regulating pro-oncogenic signals. *Mol Carcinog*. 2014 Jun;53(6):432-9.

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

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