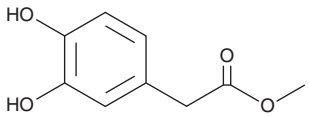
PRODUCT INFORMATION

Methyl 3,4-Dihydroxyphenylacetate

Item No. 30637

CAS Registry No.:	25379-88-8
Formal Name:	3,4-dihydroxy-benzeneacetic acid, methyl ester
Synonyms:	Methyl 2-(3,4-dihydroxyphenyl)acetate, 3,4-Dihydroxyphenylacetic acid methyl ester
MF:	$C_9H_{10}O_4$
FW:	182.2
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Methyl 3,4-dihydroxyphenylacetate is supplied as a solid. A stock solution may be made by dissolving the methyl 3,4-dihydroxyphenylacetate in the solvent of choice, which should be purged with an inert gas. Methyl 3,4-dihydroxyphenylacetate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of methyl 3,4-dihydroxyphenylacetate in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of methyl 3,4-dihydroxyphenylacetate can be prepared by directly dissolving the solid in aqueous buffers. The solubility of methyl 3,4-dihydroxyphenylacetate in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Methyl 3,4-dihydroxyphenylacetate is a polyphenol that has been found in *I. aquifolium* seeds and has antioxidant and antiviral activities.[1,2] It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay (IC_{50} = 0.0025 mg/ml).[1] Methyl 3,4-dihydroxyphenylacetate (0.01 µg/ml) inhibits enterovirus 71 replication in rhabdomyosarcoma cells.[2]

References

1. Nahar, L., Russell, W.R., Middleton, M., *et al.* Antioxidant phenylacetic acid derivatives from the seeds of *Ilex aquifolium*. *Acta Pharm.* **55(2)**, 187-193 (2005).
2. Wang, L., Wang, J., Wang, L., *et al.* Anti-enterovirus 71 agents of natural products. *Molecules* **20(9)**, 16320-16333 (2015).

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