

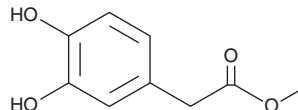
# PRODUCT INFORMATION



## 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<sub>9</sub>H<sub>10</sub>O<sub>4</sub>  
**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.<sup>1,2</sup> It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay (IC<sub>50</sub> = 0.0025 mg/ml).<sup>1</sup> Methyl 3,4-dihydroxyphenylacetate (0.01 µg/ml) inhibits enterovirus 71 replication in rhabdomyosarcoma cells.<sup>2</sup>

### 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/08/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM