PRODUCT INFORMATION



Homovanillic Acid

Item No. 27307

CAS Registry No.:	306-08-1	
Formal Name:	4-hydroxy-3-methoxy-benzeneacetic acid	
Synonyms:	HVA, NSC 16682, Vanilacetic Acid	
MF:	$C_{9}H_{10}O_{4}$	
FW:	182.2	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 231, 282 nm	
Ex./Em. Max:	312/420 nm	HO °
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	

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

Laboratory Procedures

Homovanillic acid (HVA) is supplied crystalline solid. A stock solution may be made by dissolving the HVA in the solvent of choice, which should be purged with an inert gas. HVA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of HVA in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

HVA is a dopamine metabolite.¹ It is formed via deamination of dopamine by monoamine oxidase (MAO) to produce 3,4-dihydroxyphenylacetic acid (DOPAC; Item No. 24912) followed by DOPAC metabolism by catechol-O-methyltransferase (COMT). HVA undergoes hydrogen peroxide-dependent oxidation in the presence of horseradish peroxidase to form a fluorescent dimer that displays excitation/emission maxima of 312/420 nm, respectively.² It has been used to quantify hydrogen peroxide production in macrophages and neutrophils.

References

- 1. Käenmaki, M., Tammimäki, A., Myöhänen, T., et al. Quantitative role of COMT in dopamine clearance in the prefrontal cortex of freely moving mice. J. Neurochem. 114(6), 1745-1755 (2010).
- Ruch, W., Cooper, P.H., and Baggiolini, M. Assay of H₂O₂ production by macrophages and neutrophils 2. with homovanillic acid and horse-radish peroxidase. J. Immunol. Methods 63(3), 347-357 (1983).

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

SAFFTY 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.

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, 11/21/2022

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