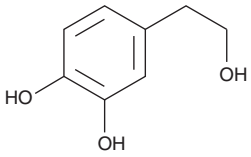
PRODUCT INFORMATION

3,4-Dihydroxyphenyl ethanol

Item No. 70604

CAS Registry No.: 10597-60-1
Formal Name: 4-(2-hydroxyethyl)-1,2-benzenediol
Synonyms: Ba2774, DOPET, 3-Hydroxytyrosol
MF: $C_8H_{10}O_3$
FW: 154.2
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years
Item Origin: Synthetic



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

Laboratory Procedures

3,4-Dihydroxyphenyl ethanol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 3,4-dihydroxyphenyl ethanol in these solvents is approximately 50 mg/ml.

3,4-Dihydroxyphenyl ethanol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 3,4-dihydroxyphenyl ethanol should be diluted with the aqueous buffer of choice. The solubility of 3,4-dihydroxyphenyl ethanol in PBS (pH 7.2) is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3,4-Dihydroxyphenyl ethanol is a phenolic component of olive oil that inhibits both 12- and 5-lipoxygenase. The IC_{50} values for the inhibition of rat platelet 12-LO and rat neutrophil 5-LO are 4.2 and 13µM, respectively. It does not inhibit, and may actually enhance, COX activity.[1] 3,4-Dihydroxyphenyl ethanol also protects LDL from both biological and chemical oxidation, suggesting a potential mechanism for the protective effects of olive oil against atherosclerosis.[2]

References

1. Kohyama, N., Nagata, T., Fujimoto, S., *et al.* Inhibition of arachidonate lipoxygenase activities by 2-(3,4-dihydroxyphenyl)ethanol, a phenolic compound from Olives. *Biosci. Biotech. Biochem.* **61(2),** 347-350 (1997).
2. Grignaffini, P., Roma, P., Galli, C., *et al.* Protection of low-density lipoprotein from oxidation by 3,4-dihydroxyphenylethanol. *Lancet* **343(8908)**, 1296-1297 (1994).

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