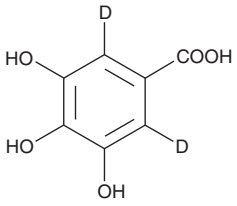
PRODUCT INFORMATION

Gallic Acid-d_2

Item No. 35132

CAS Registry No.:	294660-92-7
Formal Name:	3,4,5-trihydroxy-benzoic-2,6-d_2 acid
Synonym:	3,4,5-Trihydroxybenzoic Acid-d_2
MF:	$C_7H_4D_2O_5$
FW:	172.1
Chemical Purity:	≥98% (Gallic acid)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_2); ≤1% d_0
UV/Vis.:	λ_{max}: 218, 273 nm
Supplied as:	A 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

Gallic acid-d_2 is intended for use as an internal standard for the quantification of gallic acid (Item No. 11846) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Gallic acid-d_2 is supplied as a solid. A stock solution may be made by dissolving the gallic acid-d_2 in the solvent of choice, which should be purged with an inert gas. Gallic acid-d_2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of gallic acid-d_2 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Gallic acid is a phenol that has been found in *C. sinensis* and has diverse biological activities.[1-4] It scavenges DPPH (Item No. 14805) and hydroxyl radicals in cell-free assays (IC_{50}s = 9.4 and 191 µM, respectively).[1] Gallic acid (1-100 µM) reverses abscisic acid-induced inhibition of hypocotyl growth in *A. caudatus* seedlings.[2] *In vivo*, gallic acid (21.8 g/kg) inhibits morpholine- and sodium nitrite-induced adenocarcinoma formation in mice.[3] It also inhibits passive cutaneous anaphylaxis in mice when administered at a dose of 50 mg/kg.[4]

References

1. Cos, P., Hermans, N., Calomme, M., *et al*. Comparative study of eight well-known polyphenolic antioxidants. *J. Pharm. Pharmacol.* **55(9)**, 1291-1297 (2003).
2. Ray, S.D., Guruprasad, K.N., and Laloraya, M.M. Antagonistic action of phenolic compounds on abscisic acid-induced inhibition of hypocotyl growth. *J. Exp. Bot.* **31(125)**, 1651-1656 (1980).
3. Mirvish, S.S., Cardesa, A., Wallcave, L., *et al*. Induction of mouse lung adenomas by amines or ureas plus nitrite and by N-nitroso compounds: Effect of ascorbate, gallic acid, thiocyanate, and caffeine. *J. Natl. Cancer Inst.* **55(3)**, 633-636 (1975).
4. Kar, K., Mohanta, P.K., Popli, S.P., *et al*. Inhibition of passive cutaneous anaphylaxis by compounds of Camellia sinensis. *Planta Med.* **42(1)**, 75-78 (1981).

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