PRODUCT INFORMATION

tetramethyl Nordihydroguaiaretic Acid
Item No. 70302

CAS Registry No.: 24150-24-1
Formal Name: rel-4-[(2R,3S)-4-(3,4-dimethoxyphenyl)-2,3-dimethylbutyl]-1,2-dimethoxy-benzene
Synonyms: EM-1421, M4N, Terameprocol, tetramethyl NDGA, TMNDGA
MF: C22H30O4
FW: 358.5
Purity: ≥95%
UV/Vis.: λmax*: 230, 280 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

tetramethyl Nordihydroguaiaretic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the tetramethyl nordihydroguaiaretic acid in the solvent of choice, which should be purged with an inert gas. tetramethyl Nordihydroguaiaretic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tetramethyl nordihydroguaiaretic acid in these solvents is approximately 0.2, 2, and 2.5 mg/ml, respectively.

tetramethyl Nordihydroguaiaretic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tetramethyl nordihydroguaiaretic acid should first be dissolved in DMF and then diluted with the aqueous buffer of choice. tetramethyl Nordihydroguaiaretic acid has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

tetramethyl Nordihydroguaiaretic acid is a derivative of the lipoxygenase inhibitor nordihydroguaiaretic acid (Item No. 70300).1,2 It inhibits Tat-regulated HIV promoter transactivation in COS-1 cells in a reporter assay with an IC50 value of 11 µM and inhibits the replication of acyclovir-sensitive and -resistant strains of herpes simplex virus (HSV-1) in Vero cells in a reporter assay with IC50 values of 5.6 and 8.9 µM, respectively.1,3 tetramethyl Nordihydroguaiaretic acid (50 µM) induces cell cycle arrest at the G1/G0 phase in A375 melanoma cells and inhibits tumor growth in an A375 mouse xenograft model when administered at a dose of 250 mg/kg.2 tetramethyl Nordihydroguaiaretic acid (166 mg/kg) also reduces tumor growth in a B16 murine melanoma model.

References