

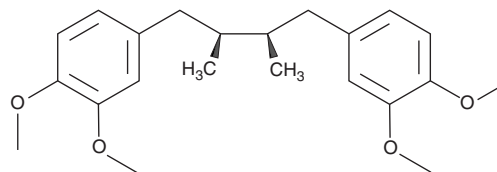
# PRODUCT INFORMATION



## 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:** C<sub>22</sub>H<sub>30</sub>O<sub>4</sub>  
**FW:** 358.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 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).<sup>1,2</sup> It inhibits Tat-regulated HIV promoter transactivation in COS-1 cells in a reporter assay with an IC<sub>50</sub> 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 IC<sub>50</sub> values of 5.6 and 8.9 μM, respectively.<sup>1,3</sup> tetramethyl Nordihydroguaiaretic acid (50 μM) induces cell cycle arrest at the G<sub>1</sub>/G<sub>0</sub> phase in A375 melanoma cells and inhibits tumor growth in an A375 mouse xenograft model when administered at a dose of 250 mg/kg.<sup>2</sup> tetramethyl Nordihydroguaiaretic acid (166 mg/kg) also reduces tumor growth in a B16 murine melanoma model.

### References

1. Hwu, J.R., Tseng, W.N., Gnabre, J., *et al. J. Med. Chem.* **41**, 2994-3000 (1998).
2. Lambert, J.D., Meyers, R.O., Timmermann, B.N., *et al. Cancer Lett* **171**, 47-56 (2001).
3. Chen, H., Teng, L., Li, J.-N., *et al. J. Med. Chem.* **41**, 3001-3007 (1998).

#### 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.

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