

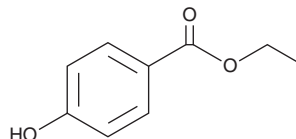
PRODUCT INFORMATION



Ethylparaben

Item No. 37357

CAS Registry No.:	120-47-8
Formal Name:	4-hydroxy-benzoic acid, ethyl ester
Synonyms:	4-Carboxyphenol, Ethyl 4-hydroxybenzoate, Ethyl <i>p</i> -hydroxybenzoate, Ethyl <i>para</i> -hydroxybenzoate, NSC 8510, NSC 23514
MF:	C ₉ H ₁₀ O ₃
FW:	166.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 258 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



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

Laboratory Procedures

Ethylparaben is supplied as a solid. A stock solution may be made by dissolving the ethylparaben in the solvent of choice, which should be purged with an inert gas. Ethylparaben is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ethylparaben in DMF is approximately 12 mg/ml and approximately 20 mg/ml in ethanol and DMSO.

Description

Ethylparaben is a paraben that has been found in *A. bracteatus* and has diverse biological activities.^{1,2,3,4} It selectively induces activation of estrogen receptor β (ER β) over ER α in yeast two-hybrid assays (EC₅₀s = 1.86 and 38.2 μ M, respectively). Ethylparaben inhibits carbonic anhydrase I (CAI), CAII, CAVII, CAIX, CAXII, and CAXIV (IC₅₀s = 7.9, 4.8, 8.7, 8.2, 8.6, and 7.7 μ M, respectively, for the human enzymes).² It is active against several strains of *P. stutzeri* and *P. aeruginosa* (MICs = 400-1,000 μ g/ml).³ Ethylparaben (0.01 and 0.1%) is cytotoxic to immortalized human meibomian gland epithelial cells.⁴ It has been found in influent and effluent wastewater.⁵ Formulations containing ethylparaben have been used as preservatives in cosmetics, food, and pharmaceuticals.

References

1. Cao, X., Jiang, J., Zhang, S., et al. Discovery of natural estrogen receptor modulators with structure-based virtual screening. *Bioorg. Med. Chem. Lett.* **23(11)**, 3329-3333 (2013).
2. Carta, F., Vullo, D., Maresca, A., et al. Mono-/dihydroxybenzoic acid esters and phenol pyridinium derivatives as inhibitors of the mammalian carbonic anhydrase isoforms I, II, VII, IX, XII and XIV. *Bioorg. Med. Chem.* **21(6)**, 1564-1569 (2013).
3. Tattawasart, U., Maillard, J.-Y., Furr, J.R., et al. Comparative responses of *Pseudomonas stutzeri* and *Pseudomonas aeruginosa* to antibacterial agents. *J. Appl. Microbiol.* **87(3)**, 323-331 (1999).
4. Wang, J., Liu, Y., Kam, W.R., et al. Toxicity of the cosmetic preservatives parabens, phenoxyethanol and chlorphenesin on human meibomian gland epithelial cells. *Exp. Eye Res.* **196**, 108057 (2020).
5. Wang, W. and Kannan, K. Fate of parabens and their metabolites in two wastewater treatment plants in New York state, United States. *Environ. Sci. Technol.* **50(3)**, 1174-1181 (2016).

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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