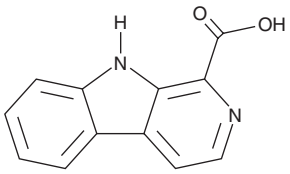
PRODUCT INFORMATION

β-Carboline-1-carboxylic Acid

Item No. 31415

CAS Registry No.: 26052-96-0
Formal Name: 9H-pyrido[3,4-b]indole-1-carboxylic acid
Synonym: 1-Formic Acid-β-carboline
MF: $C_{12}H_8N_2O_2$
FW: 212.2
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Quassia amara*



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

Laboratory Procedures

β-Carboline-1-carboxylic acid is supplied as a solid. A stock solution may be made by dissolving the β-carboline-1-carboxylic acid in the solvent of choice, which should be purged with an inert gas. β-Carboline-1-carboxylic acid is soluble in methanol and DMSO.

Description

β-Carboline-1-carboxylic acid is an alkaloid that has been found in *P. quassioides* and has diverse biological activities.[1-3] It reduces LPS-induced increases in MCP-1, TNF-α, IL-6, and IL-1β levels in RAW 264.7 cells when used at a concentration of 15 µg/ml and inhibits the epithelial-to-mesenchymal transition (EMT) induced by TGF-β1 in A549 cells.[2] β-Carboline-1-carboxylic acid induces cytotoxicity in CT26.WT, K562, and SGC-7901 cells (IC_{50}s = 14.96, 22.11, and 19.7 µg/ml, respectively) but not HepG2 or A549 cells (IC_{50}s = 36.41 and 41.51 µg/ml, respectively).[1] It also inhibits cAMP phosphodiesterase with an IC_{50} value of 96 µM.[3]

References

1. Lai, Z.-Q., Liu, W.-H., Ip, S.-P., *et al.* Seven alkaloids from *Picrasma quassioides* and their cytotoxic activities. *Chem. Nat. Compd.* **50(5)**, 884–888 (2014).
2. Cui, Y., Jiang, L., Yu, R., *et al.* β-carboline alkaloids attenuate bleomycin induced pulmonary fibrosis in mice through inhibiting NF-kb/p65 phosphorylation and epithelial-mesenchymal transition. *J. Ethnopharmacol.* **243**, 112096 (2019).
3. Sung, Y.-I., Koike, K., Nikaido, T., *et al.* Inhibitors of cyclic AMP phosphodiesterase in *Picrasma quassioides* BENNET, and inhibitory activities of related *β*-carboline alkaloids. *Chem. Pharm. Bull. (Tokyo)* **32(5)**, 1872-1877 (1984).

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