

Product Data Sheet

Product Name: 5-hydroxy Tryptophol

Cat. No.: GC12829

Chemical Properties

Cas. No. 154-02-9

Chemical Name 5-hydroxy-1H-indole-3-ethanol

SMILES OCCC1=CNC2=C1C=C(O)C=C2

Formula $C_{10}H_{11}NO_2$ M.Wt 177.2

Solubility $\leq 30\text{mg/ml}$ in ethanol; 30mg/ml in DMSO; 30mg/ml in dimethyl formamide Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

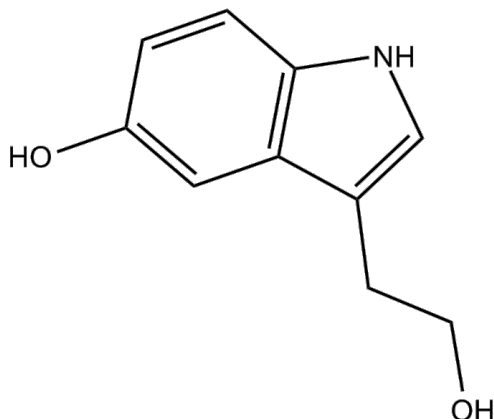
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Background

5-hydroxy Tryptophol is a metabolite of tryptophan.

Tryptophan (encoded by the codon UGG) is an α -amino acid that is used in the biosynthesis of proteins. Tryptophan has an α -amino group, an α -carboxylic acid group, and a side chain indole, demonstrating it as a non-polar, aromatic amino acid. Tryptophan is critical in humans, but the body cannot synthesize it and therefore tryptophan must be obtained from the diet. Tryptophan is also found to be a precursor to the neurotransmitters serotonin and melatonin.

In vitro: In previous studies, 5-hydroxy tryptophol was identified as a metabolite of tryptophan that was formed by the alcohol dehydrogenase-catalyzed reduction of the serotonin intermediate, 5-hydroxyindoleacetaldehyde. Moreover, depending on the tissue NAD/NADH ratio, the acetaldehyde intermediate could also be oxidized by aldehyde dehydrogenase to form 5-hydroxyindoleacetic acid. Therefore, the ratio of 5-hydroxy tryptophol to 5-hydroxyindoleacetic acid could be used as a biomarker for recent alcohol consumption [1,2].

In vivo: Up to now, there is no animal in vivo data reported.

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Clinical trial: So far, no clinical study has been conducted.

References:

- [1] Yokoyama, M. T. and Carlson, J.R. Dissimilation of tryptophan and related indolic compounds by ruminal microorganisms in vitro. Appl.Microbiol. 27(3), 540-548 (1974).
- [2] Beck, O. ,Stephanson, N.,Btthcer, M., et al. Biomarkers to disclose recent intake of alcohol: Potential of 5-hydroxytryptophol glucuronide testing using new direct UPLC-tandem MS and ELISA methods. Alcohol & Alcoholism 42(4), 321-325 (2007).

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