

Harmine

Catalog No: tcsc5325



Available Sizes

Size: 500mg



Specifications

CAS No:

442-51-3

Formula:

$C_{13}H_{12}N_2O$

Pathway:

Protein Tyrosine Kinase/RTK;Neuronal Signaling;GPCR/G Protein;Cell Cycle/DNA Damage

Target:

DYRK;5-HT Receptor;5-HT Receptor;RAD51

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 30 mg/mL (141.34 mM); H₂O :

Alternative Names:

Telepathine

Observed Molecular Weight:

212.25

Product Description

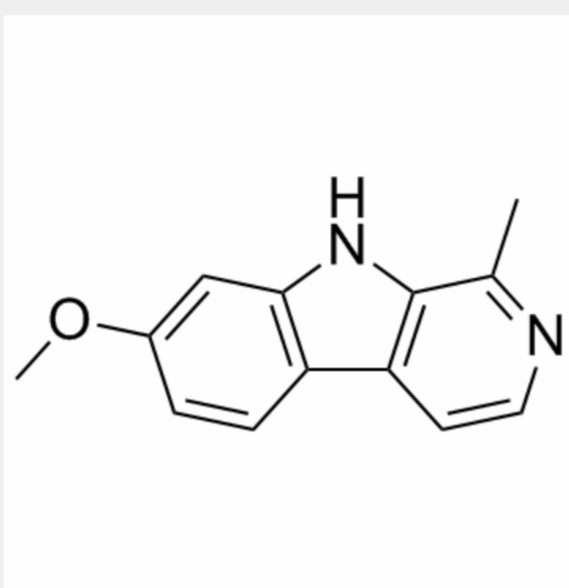
Harmine is a natural dual-specificity tyrosine phosphorylation-regulated kinase ((**DYRK**)) inhibitor with anticancer and anti-inflammatory activities.

IC₅₀ & Target: Ki: 397 nM (5-HT_{2A})^[1], DYRK1A^[2], Rad51^[3].

In Vitro:

Harmine is an inhibitor of 5-HT_{2A}, with an K_i of 397 nM^[1]. Harmine inhibits tau phosphorylation by DYRK1A by selected DANDYs, with an IC₅₀ of 190 nM^[2]. Harmine negatively regulates HR by interfering Rad51 recruitment, resulting in severe cytotoxicity in hepatoma cells. Furthermore, NHEJ inhibitor Nu7441 markedly sensitizes Hep3B cells to the anti-proliferative effects of Harmine^[3].

In Vivo: It is shown that brain water content is significantly increased in the TBI group. Treatment with Harmine significantly reduces the tissue water content at 1, 3 and 5 days, compared with the TBI group. Harmine treatment significantly reduces the escape latency at 3 and 5 days, compared with the TBI group. Post-TBI administration of Harmine significantly improves the motor function recovery of the rats at 1, 3 and 5 days following TBI, compared with the TBI group without Harmine treatment. The neuronal survival rate in the Harmine-treated group is significantly increased, compared with the TBI group. Administration of Harmine results in marked elevation in the expression of GLT-1, compared with the TBI group. The administration of Harmine significantly reduces the expression of caspase 3, compared with the TBI group^[4].



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