# Data Sheet

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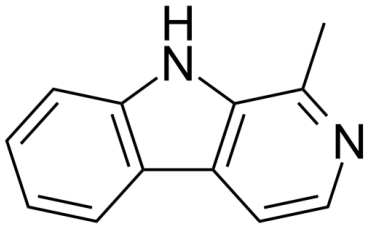
| **Product Name:** | Harmane |
| **Cat. No.:** | CS-0021283 |
| **CAS No.:** | 486-84-0 |
| **Molecular Formula:** | $C_{12}H_{10}N_2$ |
| **Molecular Weight:** | 182.22 |
| **Target:** | Adrenergic Receptor; Imidazoline Receptor; Monoamine Oxidase |
| **Pathway:** | GPCR/G Protein; Neuronal Signaling |
| **Solubility:** | DMSO : 125 mg/mL (685.98 mM; Need ultrasonic) |



## BIOLOGICAL ACTIVITY:

Harmane, a β-Carboline alkaloid (BCA), is a potent neurotoxin that causes severe action tremors and psychiatric manifestations. Harmane shows 1000-fold selectivity for **I1-Imidazoline receptor** (**$IC_{50}$**=30 nM) over **α2-adrenoceptor** (**$IC_{50}$**=18 μM). Harmane is also a potent and selective inhibitor of **monoamine oxidase (MAO)** (**$IC_{50}$**s=0.5 and 5 μM for **human MAO A/B**, respectively). Harmane exhibits comutagenic effect[1][2][3][4].

## References:

[1]. Louis ED, et, al. Blood harmane concentrations and dietary protein consumption in essential tremor. Neurology. 2005 Aug 9;65(3):391-6.

[2]. Musgrave IF, et, al. Harmane produces hypotension following microinjection into the RVLM: possible role of I(1)-imidazoline receptors. Br J Pharmacol. 2000 Mar;129(6):1057-9.

[3]. Glover V, et, al. β-Carbolines as selective monoamine oxidase inhibitors:In vivo implications

[4]. Umezawa K, et, al. Comutagenic effect of norharman and harman with 2-acetylaminofluorene derivatives. Proc Natl Acad Sci U S A. 1978 Feb;75(2):928-30.

## CAIndexNames:

9H-Pyrido[3,4-b]indole, 1-methyl-

## SMILES:

CC1=NC=CC2=C1NC3=C2C=CC=C3



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