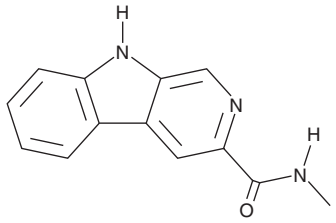
PRODUCT INFORMATION

FG-7142

Item No. 29183

CAS Registry No.:	78538-74-6
Formal Name:	N-methyl-9H-pyrido[3,4-b]indole-3-carboxamide
Synonym:	ZK 39106
MF:	$C_{13}H_{11}N_3O$
FW:	225.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 217, 235, 271 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

FG-7142 is supplied as a crystalline solid. A stock solution may be made by dissolving the FG-7142 in the solvent of choice, which should be purged with an inert gas. FG-7142 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of FG-7142 in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

FG-7142 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FG-7142 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. FG-7142 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

FG-7142 is a benzodiazepine receptor ligand with anxiogenic and proconvulsant properties.[1] It increases benzodiazepine receptor ligand binding and GABA-dependent chloride uptake in primary chick cerebral cortical neurons when used at a concentration of 1 µM. FG-7142 (5 mg/kg) decreases pinning of the other animal and increases avoiding behavior in rats, an effect that can be prevented by the benzodiazepine receptor antagonist Ro 15-1788 (flumazenil; Item No. 14252).[2] It reduces the infused pentylenetetrazol (PTZ; Item No. 18682) seizure threshold and induces generalized seizures in mice when administered at doses of 10 and 40 mg/kg, respectively.[3] FG-7142 (3.75, 7.5, and 15 mg/kg, i.p.) also decreases food and water intake, eating rate, and time spent in the open arms of the elevated plus maze in female rats.[4]

References

1. Miller, L.G., Heller, J., Lumpkin, M., *et al.* Augmentation of $GABA_A$ receptor function by chronic exposure to GABA-neutral and GABA-negative benzodiazepine ligands in cultured cortical neurons. *Biochem. Pharmacol.* **40(6)**, 1337-1344 (1990).
2. Beck, C.H. and Cooper, S.J. β-Carboline FG 7142-reduced aggression in male rats: Reversed by the benzodiazepine receptor antagonist, Ro15-1788. *Pharmacol. Biochem. Behav.* **24(6)**, 1645-1649 (1986).
3. Little, H.J., Nutt, D.J., and Taylor, S.C. Acute and chronic effects of the benzodiazepine receptor ligand FG 7142: Proconvulsant properties and kindling. *Br. J. Pharmacol.* **83(4)**, 951-958 (1984).
4. Cottone, P., Sabino, V., Steardo, L., *et al.* FG 7142 specifically reduces meal size and the rate and regularity of sustained feeding in female rats: Evidence that benzodiazepine inverse agonists reduce food palatability. *Neuropsychopharmacology* **32(5)**, 1069-1081 (2007).

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