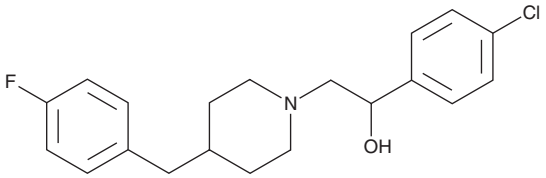
PRODUCT INFORMATION

Eliprodil

Item No. 18398

CAS Registry No.:	119431-25-3
Formal Name:	α-(4-chlorophenyl)-4-[(4-fluorophenyl)methyl]-1-piperidineethanol
Synonym:	SL 820715
MF:	$C_{20}H_{23}ClFNO$
FW:	347.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 216, 266, 272 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

Eliprodil is supplied as a crystalline solid. A stock solution may be made by dissolving the eliprodil in the solvent of choice, which should be purged with an inert gas. Eliprodil is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of eliprodil in ethanol and DMSO is approximately 2 mg/ml and approximately 10 mg/ml and DMF.

Description

N-Methyl-D-aspartate (NMDA) receptors are calcium permeable ligand-gated channels of the central nervous system that are activated after binding of the co-agonists glutamate and glycine. Eliprodil is a non-competitive NMDA receptor antagonist that inhibits neuronal calcium channel currents.[1] It is selective for NR2B subunit-containing receptors (IC_{50} = 1 µM), displaying greater than 100-fold selectivity for NR2B over NR2A and NR2C subunits.[2,3] Eliprodil also avidly binds σ_1 and σ_2 sites (K_is = 0.013 and 0.63 µM, respectively).[2] It is effective *in vivo*, blocking ischemia-induced neurodegeneration in the CA1 region of the hippocampus of gerbils subjected to bilateral carotid artery occlusion.[1] Eliprodil can also have proarrhythmic actions in hearts under normal conditions.[4]

References

1. Bath, C.P., Farrell, L.N., Gilmore, J., *et al.* The effects of ifenprodil and eliprodil on voltage-dependent Ca^{2+} channels and in gerbil global cerebral ischaemia. *Eur. J. Pharmacol.* **299(1-3)**, 103-112 (1996).
2. Whittemore, E.R., Ilyin, V.I., and Woodward, R.M. Antagonism of N-methyl-D-aspartate receptors by σ site ligands: Potency, subtype-selectivity and mechanisms of inhibition. *J. Pharmacol. Exp. Ther.* **282(1)**, 326-338 (1997).
3. Grimwood, S., Richards, P., Murray, F., *et al.* Characterisation of N-methyl-D-aspartate receptor-specific [^{3}H]Ifenprodil binding to recombinant human NR1a/NR2B receptors compared with native receptors in rodent brain membranes. *J. Neurochem.* **75(6)**, 2455-2463 (2000).
4. Lengyel, C., Dézsi, L., Biliczki, P., *et al.* Effect of a neuroprotective drug, eliprodil on cardiac repolarisation: Importance of the decreased repolarisation reserve in the development of proarrhythmic risk. *Br. J. Pharmacol.* **143(1)**, 152-158 (2004).

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