

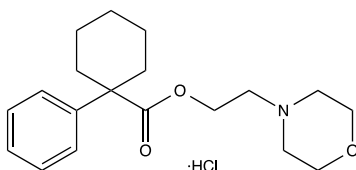
Catalog # 10-4203

PRE-084 hydrochloride

2-(4-Morpholinethyl) 1-phenylcyclohexanecarboxylate hydrochloride

138847-85-5

Lot # FBS1059



PRE084 is an agonist of the σ receptor with selectivity for the σ_1 subtype (IC_{50} 's: $\sigma_1 = 2.2\text{nM}$, $\sigma_2 = 13091\text{nM}$).¹ PRE-084 has demonstrated neuroprotective/restorative effects in brain injury^{2,3} and neurodegenerative conditions⁴⁻⁷.

- 1) Su *et al.* (1991), *Sigma compounds derived from phencyclidine. Identification of PRE-084, a new selective sigma ligand*; J.Pharmacol.Exp.Ther. **259** 543
- 2) Griesmaier *et al.* (2012), *Neuroprotective effects of the sigma-1 receptor ligand PRE-084 against excitotoxic perinatal brain injury in newborn mice*; Exp.Neurol. **237** 388
- 3) Dong *et al.* (2016), *Sigma-1 Receptor Modulates Neuroinflammation After Traumatic Brain Injury*; Cell Mol.Neurobiol. **36** 639
- 4) Guzman-Lenis *et al.* (2009), *Selective sigma receptor agonist 2-(4-Morpholinethyl) 1-phenylcyclohexanecarboxylate (PRE084) promotes neuroprotection and neurite elongation through protein kinase C (PKC) signaling on motoneurons*; Neuroscience **162** 31
- 5) Hyrskyluoto *et al.* (2013), *Sigma-1 receptor agonist PRE084 is protective against mutant huntingtin-induced cell degeneration: involvement of calpastatin and the NF-kB pathway*; Cell Death Dis. **4** e646
- 6) Francardo *et al.* (2014), *Pharmacological stimulation of sigma-1 receptors has neurorestorative effects in experimental parkinsonism*; Brain **137(Pt7)** 1998
- 7) Mancuso *et al.* (2012), *Sigma-1R agonist improves motor function and motoneuron survival in ALS mice*; Neurotherapeutics **9** 814

PHYSICAL DATA

Molecular Weight: 353.89
Molecular Formula: C₁₉H₂₇NO₃·HCl
Purity: >98% by HPLC
NMR: Conforms
Solubility: DMSO (25 mg/mL) and water (7 mg/mL)
Physical Description: White solid
Storage and Stability: Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 3 months.

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