



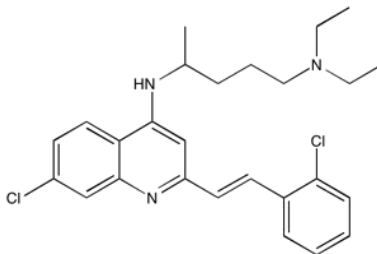
Catalog # 10-1486

XIB4035

CAS# 10023-54-8

(E)-N4-(7-chloro-2-(2-chlorostyryl)quinolin-4-yl)-N1,N1-diethylpentane-1,4-diamine 3(H₃PO₄)

Lot # X106212



A novel small molecule thought to be an agonist at the glial cell line-derived neurotrophic factor (GDNF) family receptor α -1 GFR α -1. It inhibits radiolabeled GDNF binding in Neuro-2A cells in a concentration dependent manner IC₅₀=10.4 μ M. Like GDNF, it induced Ret autophosphorylation and promoted neurite outgrowth in Neuro-2A cells¹. Recent studies indicate that it enhances GFR α family receptor signaling in conjunction with ligand stimulation. Effective treatment for small-fiber neuropathy in mouse models of the disease.^{2,3} GDNF agonists may be a new class of Parkinson's disease therapeutics.⁴

- 1) Tokugawa *et al.* (2003), *XIB4035, a novel nonpeptidyl small molecule agonist for GFR α -1*; *Neurochem. Int.*, **42** 81
- 2) Hedstrom *et al.* (2014), *Treating small fiber neuropathy by topical application of a small molecule modulator of ligand-induced GFR α /RET receptor signaling*; *Proc. Natl. Acad. Sci. USA*, **111** 2325
- 3) Hsieh *et al.* (2018) *Distinct TrkA and Ret Modulated negative and positive neuropathic behaviors in a mouse model of resniferatoxin-induced small fiber neuropathy*; *Exp. Neurol.*, **300** 87
- 4) Drinkut *et al.* (2016) *Ret is essential to mediate GDNF's neuroprotective and neuroregenerative effect in Parkinson disease mouse model*; *Cell Death Dis.* **7** e2359

PHYSICAL DATA

Molecular Weight:	750.45
Molecular Formula:	C ₂₆ H ₃₁ Cl ₂ N ₃ · 3(H ₃ PO ₄)
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml with warming)
Physical Description:	Light brown solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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