

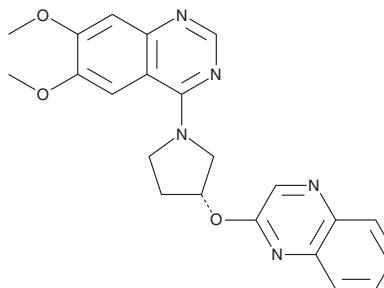
PRODUCT INFORMATION



PQ-10

Item No. 21867

CAS Registry No.: 927691-21-2
Formal Name: 6,7-dimethoxy-4-[(3R)-3-(2-quinoxalinyloxy)-1-pyrrolidinyl]-quinazoline
MF: C₂₂H₂₁N₅O₃
FW: 403.4
Purity: ≥98%
UV/Vis.: λ_{max}: 219, 246, 297, 325, 337 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

PQ-10 is supplied as a crystalline solid. A stock solution may be made by dissolving the PQ-10 in the solvent of choice, which should be purged with an inert gas. PQ-10 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PQ-10 in these solvents is approximately 16 and 25 mg/ml, respectively.

PQ-10 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PQ-10 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PQ-10 has a solubility of approximately 0.04 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PQ-10 is a potent and selective inhibitor of phosphodiesterase type 10 (PDE10; K_i = 4 nM).¹ It has >38-fold selectivity for PDE10 over a panel of 60 CNS-associated receptors, enzymes, and ion channels *in vitro*. Subcutaneous injection of PQ-10 (32 mg/kg) leads to increases in striatal cGMP and phosphorylation of cAMP response element binding protein (CREB) in murine striatum, known markers of *in vivo* PDE10 inhibition. PQ-10 at a dose of 0.3 mg/kg, p.o., reduces scopolamine- and MK-801-induced memory deficits in rats.² PQ-10 also inhibits tumor cell growth with IC₅₀ values of 0.29 and 0.22 mM for HCT116 and SW480 colon cancer cells, respectively.³

References

1. Chappie, T.A., Humphrey, J.M., Allen, M.P., *et al.* Discovery of a series of 6,7-dimethoxy-4-pyrrolidylquinazoline PDE10A inhibitors. *J. Med. Chem.* **50**(2), 182-185 (2007).
2. Reneerkens, O.A.H., Rutten, K., Bollen, E., *et al.* Inhibition of phosphodiesterase type 2 or type 10 reverses object memory deficits induced by scopolamine or MK-801. *Behav. Brain Res.* **236**(1), 16-22 (2013).
3. Li, N., Lee, K., Zhu, B., *et al.* Phosphodiesterase 10A: A novel target for selective inhibition of colon tumor cell growth and β-catenin-dependent TCF transcriptional activity. *Oncogene* **34**(12), 1499-1509 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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