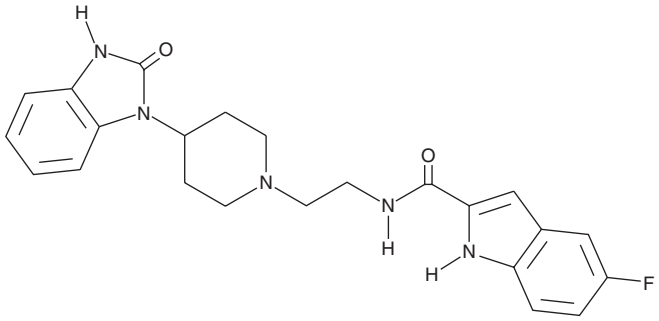
PRODUCT INFORMATION

FIPI

Item No. 13563

CAS Registry No.:	939055-18-2
Formal Name:	N-[2-[4-(2,3-dihydro-2-oxo-1H-benzimidazol-1-yl)-1-piperidinyl]ethyl]-5-fluoro-1H-indole-2-carboxamide
Synonym:	5-Fluoro-2-Indolyl des-Chlorohalopemide
MF:	$C_{23}H_{24}FN_5O_2$
FW:	421.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 288 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

FIPI is supplied as a crystalline solid. A stock solution may be made by dissolving the FIPI in the solvent of choice, which should be purged with an inert gas. FIPI is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of FIPI in these solvents is approximately 0.25, 20, and 25 mg/ml, respectively.

FIPI is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FIPI should first be dissolved in DMF and then diluted with the aqueous buffer of choice. FIPI has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Isoforms of phospholipase D (PLD) cleave the head group from phospholipids, releasing the second messenger phosphatidic acid (PA), which can produce changes in Ras activation, cell spreading, stress fiber formation, chemotaxis, and membrane vesicle trafficking. FIPI is a derivative of halopemide which potently inhibits both PLD_1 (IC_{50} = 25 nM) and PLD_2 (IC_{50} = 20 nM).[1,2] It also prevents PLD regulation of F-actin cytoskeleton reorganization, cell spreading, and chemotaxis.[1] FIPI has good pharmacokinetic parameters in rats, with a half-life greater than five hours, a C_{max} that, at 363 nM, is greater than 10-fold the IC_{50} *versus* PLD_2, and bioavailability of 18%.[2]

References

1. Su, W., Yeku, O., Olepu, S., *et al.* 5-fluoro-2-indolyl des-chlorohalopemide (FIPI), a phospholipase D pharmacological inhibitor that alters cell spreading and inhibits chemotaxis. *Mol. Pharmacol.* **75(3)**, 437-446 (2009).
2. Monovich, L., Mugrage, B., Quadros, E., *et al.* Optimization of halopemide for phospholipase D2 inhibition. *Bioorg. Med. Chem. Lett.* **17(8)**, 2310-2311 (2007).

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