

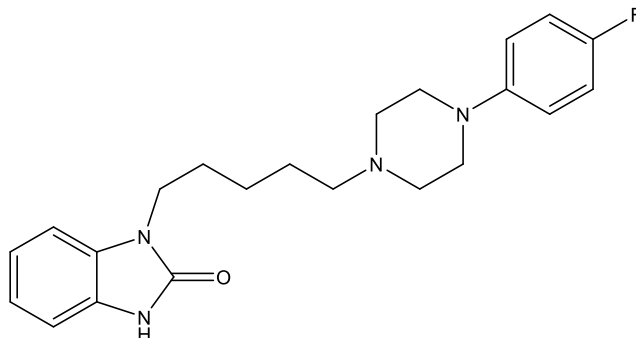
Catalog # 10-4086

Serodolin

CAS# 1814929-81-1

1-(5-(4-(4-Fluorophenyl)piperazin-1-yl)pentyl)-1H-benzo[d]imidazole-2(3H)-one

Lot # FBA8092



Serodolin is a potent dual antagonist of the serotonin receptors 5-HT₇ (K_i = 6.2 nM; IC₅₀ = 5.7 nM cAMP response) and 5-HT_{2A} (K_i = 19 nM; IC₅₀ = 110 nM IP1 response) with significant selectivity over 5-HT_{1A} and 5-HT₆.¹ Serodolin has recently been found to act as a β-arrestin-biased inverse agonist on G_s signaling while inducing ERK activation requiring c-SRS activation, a unique pharmacological profile among 5-HT₇ ligands.² It decreased hyperalgesia and pain sensation in response to inflammatory, thermal, and mechanical stimulation in a mouse model demonstrating the therapeutic potential of a β-arrestin-biased ligand for pain relief. Blood-brain barrier permeable.

- 1) Deau *et al.* (2015), *Rational Design, Pharmacomodulation, and Synthesis of Dual 5-Hydroxytryptamine 7 (5-HT₇)/5-Hydroxytryptamine 2A (5-HT_{2A}) Receptor Antagonists and Evaluation by [¹⁸F]-PET Imaging in a Primate Brain*; J. Med. Chem. **58** 8066
- 2) El Kamlichi *et al.* (2022), *Serodolin, a β-arrestin-biased ligand of 5-HT₇ receptor, attenuates pain-related behaviors*; Proc. Natl. Acad. Sci. USA **119** e2118847119

PHYSICAL DATA

Molecular Weight:	382.47
Molecular Formula:	C ₂₂ H ₂₇ FN ₄ O
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (at least 50 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C 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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