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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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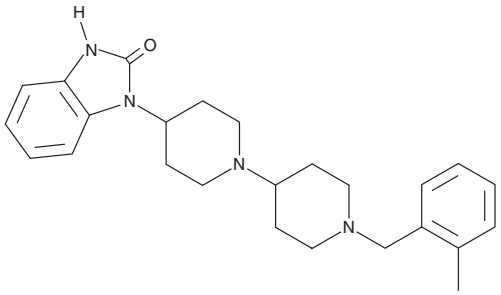
PRODUCT INFORMATION

TBPB

Item No. 22943

CAS Registry No.:	634616-95-8
Formal Name:	1,3-dihydro-1-[1'-[(2-methylphenyl) methyl][1,4'-bipiperidin]-4-yl]-2H-benzimidazol-2-one
MF:	$C_{25}H_{32}N_4O$
FW:	404.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TBPB is supplied as a crystalline solid. A stock solution may be made by dissolving the TBPB in the solvent of choice, which should be purged with an inert gas. TBPB is soluble in organic solvents such as chloroform and dimethyl formamide (DMF). The solubility of TBPB in these solvents is approximately 30 and 10 mg/ml, respectively.

TBPB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TBPB should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TBPB has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

TBPB is an allosteric agonist of M_1 muscarinic acetylcholine receptors (mAChRs; EC_{50} = 158 nM in CHO-K1 cells expressing rat recombinant receptors).[1] It is selective for M_1 over $M_{2\text{-}5}$ receptors at concentrations up to 10 µM. TBPB (3 µM) potentiates NMDA-evoked currents in CA1 pyramidal cells. It increases production of the non-amyloidogenic amyloid precursor protein (APP) cleavage products $APP_{s\alpha}$ and CTFα in PC12 cells overexpressing the human M_1 receptor and APP when used at a concentration of 1 µM. TBPB decreases amphetamine-induced hyperlocomotion in a rat model that is predictive of antipsychotic-like activity.

References

1. Jones, C.K., Brady, A.E., Davis, A.A., *et al.* Novel selective allosteric activator of the M_1 muscarinic acetylcholine receptor regulates amyloid processing and produces antipsychotic-like activity in rats. *J. Neurosci.* **28(41),** 10422-10433 (2008).

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