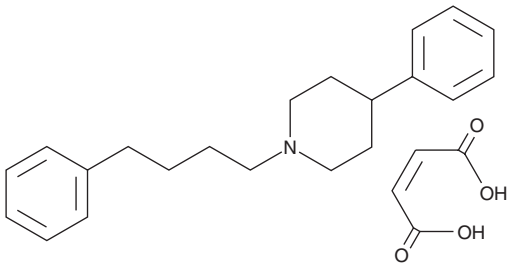
PRODUCT INFORMATION

4-PPBP (maleate)

Item No. 46468

CAS Registry No.:	201216-39-9
Formal Name:	4-phenyl-1-(4-phenylbutyl)-piperidine, 2Z-butenedioate
MF:	$C_{21}H_{27}N \bullet C_4H_4O_4$
FW:	409.5
Purity:	≥98%
Supplied as:	A 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

4-PPBP (maleate) is supplied as a solid. A stock solution may be made by dissolving the 4-PPBP (maleate) in the solvent of choice, which should be purged with an inert gas. 4-PPBP (maleate) is soluble (≥10 mg/ml) in DMSO.

Description

4-PPBP is an agonist of the sigma-1 (σ_1) receptor and an antagonist of NR1A/2B subunit-containing NMDA receptors.[1,2] It selectively inhibits calcium currents in *Xenopus* oocytes expressing the NR1A/2B subunit-containing NMDA receptor (IC_{50} = 2.2 µM) over those expressing the NR1A/2A or NR1A/2C subunits (IC_{50}s = >100 µM for both).[2] 4-PPBP reduces cell death induced by glutamate or oxygen-glucose deprivation in primary rat cortical neurons and reduces infarct volumes in rat and cat models of transient focal ischemia.[1,3,4]

References

1. Yang, S., Bhardwaj, A., Cheng, J., *et al.* Sigma receptor agonists provide neuroprotection *in vitro* by preserving *bcl-2*. *Anesth. Analg.* **104(5),** 1179-1184 (2007).
2. Guzikowski, A.P., Tamiz, A.P., Acosta-Burruel, M., *et al.* Synthesis of *N*-substituted 4-(4-hydroxyphenyl) piperidines, 4-(4-hydroxybenzyl)piperidines, and (±)-3-(4-hydroxyphenyl)pyrrolidines: Selective antagonists at the 1_A/2B NMDA receptor subtype. *J. Med. Chem.* **43(5),** 984-994 (2000).
3. Takahashi, H., Kirsch, J.R., Hashimoto, K., *et al.* PPBP [4-phenyl-1-(4-phenylbutyl)piperidine], a potent sigma-receptor ligand, decreases brain injury after transient focal ischemia in cats. *Stroke* **26(9),** 1676-1682 (1995).
4. Takahashi, H., Kirsch, J.R., Hashimoto, K., *et al.* PPBP [4-phenyl-1-(4-phenylbutyl)piperidine] decreases brain injury after transient focal ischemia in rats. *Stroke* **27(11),** 2120-2123 (1996).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM