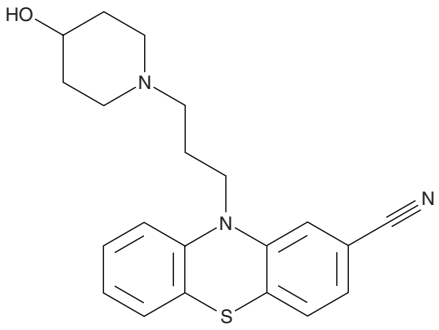
PRODUCT INFORMATION

Periciazine

Item No. 33149

CAS Registry No.:	2622-26-6
Formal Name:	10-[3-(4-hydroxy-1-piperidinyl) propyl]-10H-phenothiazine-2-carbonitrile
Synonyms:	Propericiazine, RP 8909, SKF 20,716
MF:	$C_{21}H_{23}N_3OS$
FW:	365.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 232, 273 nm
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

Periciazine is supplied as a solid. A stock solution may be made by dissolving the periciazine in the solvent of choice, which should be purged with an inert gas. Periciazine is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml. Periciazine is slightly soluble in chloroform and methanol.

Description

Periciazine is a typical antipsychotic.[1] It binds to the dopamine D_1 receptor and androgen receptor (K_is = 0.01 and 3 µM, respectively).[1,2] Periciazine is an α_1-adrenergic receptor (α_1-AR) antagonist (IC_{50} = 0.0041 µM in rat forebrain homogenates), as well as an α_2-AR antagonist (IC_{50} = 2 µM in rat cortical homogenates).[3] It also inhibits severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) main protease (M^{pro}) activity by 55% when used at a concentration of 100 µM.[4] Periciazine (0.075 mg/kg) increases the number of entries into, and the percentage of time spent in, the open arms of the elevated plus maze in rats, indicating anxiolytic-like activity.[5] Formulations containing periciazine have been used in the treatment of schizophrenia and psychosis.

References

1. Kanba, S., Suzuki, E., Nomura, S., *et al.* Affinity of neuroleptics for D_1 receptor of human brain striatum. *J. Psychiatry Neurosci.* **19(4)**, 265-269 (1994).
2. Bisson, W.H., Cheltsov, A.V., Bruey-Sedano, N., *et al.* Discovery of antiandrogen activity of nonsteroidal scaffolds of marketed drugs. *Proc. Nat. Acad. Sci. USA* **104(29)**, 11927-11932 (2007).
3. Megens, A.A.H.P., Leysen, J.E., Awouters, F.H.L., *et al.* Further validation of in vivo and in vitro pharmacological procedures for assessing the α_2/α_1-selectivity of test compounds: (1) α-adrenoceptor antagonists. *Eur. J. Pharmacol.* **129(1-2)**, 49-55 (1986).
4. Ghahremanpour, M.M., Tirado-Rives, J., Deshmukh, M., *et al.* Identification of 14 known drugs as inhibitors of the main protease of SARS-CoV-2. *ACS Med. Chem. Lett.* **11(12)**, 2526-2533 (2020).
5. Cechin, E.M., Quevedo, J., Barichello, T., *et al.* Dose-related effects of propericiazine in rats. *Braz. J. Med. Biol. Res.* **36(2)**, 227-231 (2003).

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