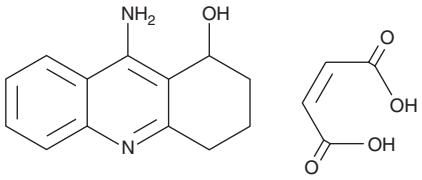
PRODUCT INFORMATION

Hydroxytacrine (maleate)

Item No. 18508

CAS Registry No.:	118909-22-1
Formal Name:	9-amino-1,2,3,4-tetrahydro-1-acridinol, 2Z-butenedioate
Synonyms:	HP 029, 1-Hydroxytacrine, P 83-6029A, Velnacrine
MF:	$C_{13}H_{14}N_2O \bullet C_4H_4O_4$
FW:	330.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 211, 241, 323, 336 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

Hydroxytacrine (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the hydroxytacrine (maleate) in the solvent of choice. Hydroxytacrine (maleate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of hydroxytacrine (maleate) in these solvents is approximately 30 and 2 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of hydroxytacrine (maleate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of hydroxytacrine (maleate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hydroxytacrine is a major active metabolite of tacrine (Item No. 70240).[1] It is formed *via* hydroxylation of tacrine by the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1A2. Hydroxytacrine inhibits acetylcholinesterase (AChE; IC_{50} = 4.8 µM).[2] *In vivo*, hydroxytacrine (33 mg/kg) reverses scopolamine-induced memory impairment in mice without inducing acute toxicity.

References

1. Peng, J.Z., Remmel, R.P., and Sawchuk, R.J. Inhibition of murine cytochrome P4501A by tacrine: *In vitro* studies. *Drug Metab. Dispos.* **32(8)**, 805-812 (2004).
4. Shutske, G.M., Pierrat, F.A., Cornfeldt, M.L., *et al.* (±)9-Amino-1,2,3,4-tetrahydroacridin-1-ol. A potential Alzheimer's disease therapeutic of low toxicity. *J. Med. Chem.* **31(7)**, 1278-1279 (1988).

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