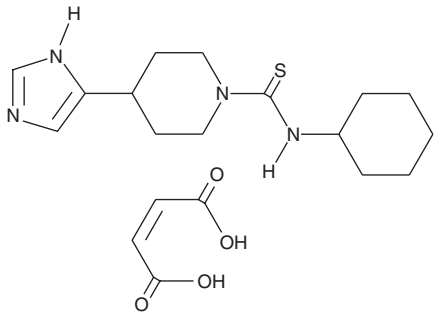
PRODUCT INFORMATION

Thioperamide (maleate)

Item No. 10011127

CAS Registry No.:	148440-81-7
Formal Name:	N-cyclohexyl-4-(1H-imidazol-5-yl)-1-piperidinecarbothioamide, 2Z-butenedioate
MF:	$C_{15}H_{24}N_4S \bullet C_4H_4O_4$
FW:	408.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 249 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

Thioperamide (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the thioperamide (maleate) in an organic solvent purged with an inert gas. Thioperamide (maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of thioperamide (maleate) in these solvents is approximately 10, 25, and 30 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 thioperamide (maleate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of thioperamide (maleate) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Thioperamide (maleate) is a selective histamine H_3 receptor antagonist that crosses the blood-brain barrier. This compound binds to rat cerebral cortical cells *in vitro* with a pK_i value of 8.4 and inhibits histamine binding *in vivo* with an ED_{50} value of 1 mg/kg.[1] At a dose of 5 mg/kg thioperamide (maleate) inhibits kindled seizures in rats by decreasing histamine and gamma-aminobutyric acid.[2]

References

1. Meier, G., Apelt, J., Reichert, U., *et al.* Influence of imidazole replacement in different structural classes of histamine H_3-receptor antagonists. *Eur. J. Pharmac. Sci.* **13(3)**, 249-259 (2001).
2. Harada, C., Fujii, Y., Hirai, T., *et al.* Inhibitory effect of iodophenprofit, a selective histamine H_3 antagonist, on amygdaloid kindled seizures. *Brain Res. Bull.* **63(2)**, 143-146 (2004).

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