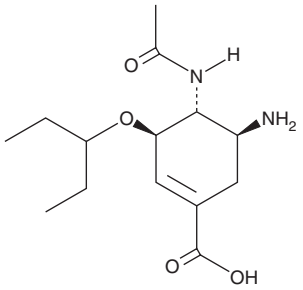
PRODUCT INFORMATION

Oseltamivir Acid

Item No. 15779

CAS Registry No.:	187227-45-8
Formal Name:	4R-(acetylamino)-5S-amino-3R-(1-ethylpropoxy)-1-cyclohexene-1-carboxylic acid
Synonyms:	GS-4071, Ro 64-0802
MF:	$C_{14}H_{24}N_2O_4$
FW:	284.4
Purity:	≥95%
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

Oseltamivir acid is supplied as a crystalline solid. A stock solution may be made by dissolving the oseltamivir acid in the solvent of choice, which should be purged with an inert gas. Oseltamivir acid is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

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 oseltamivir acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of oseltamivir acid in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Oseltamivir (GS-4104) is an antiviral prodrug targeted against the influenza viruses.[1,2] Oseltamivir acid is the active metabolite of oseltamivir.[3,4] It acts as an inhibitor of influenza neuraminidases A and B (IC_{50} = 0.1 to 4.9 nM for both enzymes), in this way preventing virus budding and release.[5-7]

References

1. Sidwell, R.W., Huffman, J.H., Barnard, D.L., *et al.* Inhibition of influenza virus infections in mice by GS4104, an orally effective influenza virus neuraminidase inhibitor. *Antiviral Res.* **37(2)**, 107-120 (1998).
2. Hayden, F.G., Atmar, R.L., Schilling, M., *et al.* Use of the selective oral neuraminidase inhibitor oseltamivir to prevent influenza. *N. Engl. J. Med.* **341(18)**, 1336-1343 (1999).
3. Li, W., Escarpe, P.S., Eisenberg, E.J., *et al.* Identification of GS 4104 as an orally bioavailable prodrug of the influenza virus neuraminidase inhibitor GS 4071. *Antimicrob. Agents Chemother.* **42(3)**, 647-653 (1998).
4. Oliyai, R., Yuan, L.C., Dahl, T.C., *et al.* Biexponential decomposition of a neuraminidase inhibitor prodrug (GS-4104) in aqueous solution. *Pharm. Res.* **15(8)**, 1300-1304 (1998).
5. Govorkova, E.A., Ilyushina, N.A., McClaren, J.L., *et al.* Susceptibility of highly pathogenic H5N1 influenza viruses to the neuraminidase inhibitor oseltamivir differs in vitro and in a mouse model. *Antimicrob. Agents Chemother.* **53(7)**, 3088-3096 (2009).
6. Krueger, A.C., Xu, Y., Kati, W.M., *et al.* Synthesis of potent pyrrolidine influenza neuraminidase inhibitors. *Bioorg. Med. Chem. Lett.* **18(5)**, 1692-1695 (2008).
7. Lew, W., Wu, H., Chen, X., *et al.* Carbocyclic influenza neuraminidase inhibitors possessing a C3-cyclic amine side chain: Synthesis and inhibitory activity. *Bioorg. Med. Chem. Lett.* **10(11)**, 1257-1260 (2000).

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