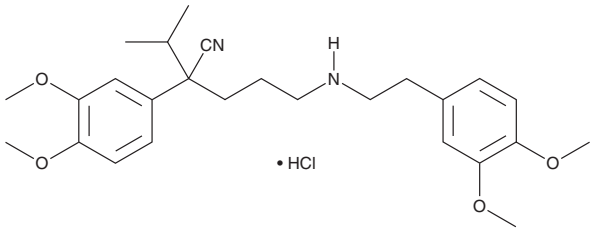
PRODUCT INFORMATION

Norverapamil (hydrochloride)

Item No. 20950

CAS Registry No.:	67812-42-4
Formal Name:	α-[3-[[2-(3,4-dimethoxyphenyl)ethyl] amino]propyl]-3,4-dimethoxy-α-(1-methylethyl)-benzeneacetonitrile, monohydrochloride
Synonym:	D 591
MF:	$C_{26}H_{36}N_2O_4$ • HCl
FW:	477.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 279 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

Norverapamil (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the norverapamil (hydrochloride) in the solvent of choice. Norverapamil (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of norverapamil (hydrochloride) in ethanol and DMSO is approximately 10 mg/ml and approximately 15 mg/ml in DMF.

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 norverapamil (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of norverapamil (hydrochloride) in PBS, pH 7.2, is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Norverapamil is the *N*-demethylated metabolite of verapamil (Item No. 14288), an L-type calcium channel blocker and P-glycoprotein inhibitor. It is the major active metabolite of verapamil with approximately 20% efficacy of its parent with regard to vasodilatory activity.[1] Norverapamil has been shown to inhibit mycobacterial efflux pumps and the expansion of *M. tuberculosis*-specific T cells.[2]

References

1. Tracy, T.S., Korzekwa, K.R., Gonzalez, F.J., *et al.* Cytochrome P450 isoforms involved in metabolism of the enantiomers of verapamil and norverapamil. *Br. J. Clin. Pharmacol.* **47(5)**, 545-552 (1999).
2. Abate, G., Ruminiski, P.G., Kumar, M., *et al.* New verapamil analogs inhibit intracellular mycobacteria without affecting the functions of *Mycobacterium*-specific T cells. *Antimicrob. Agents Chemother.* **60(3)**, 1216-1225 (2015).

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