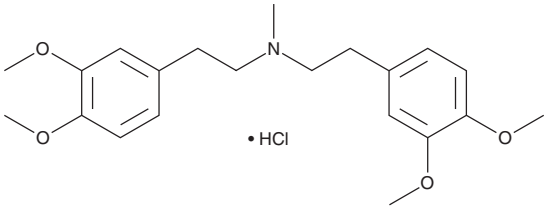
PRODUCT INFORMATION

YS-035 (hydrochloride)

Item No. 17705

CAS Registry No.:	89805-39-0
Formal Name:	N-[2-(3,4-dimethoxyphenyl) ethyl]-3,4-dimethoxy-N-methyl-benzeneethanamine, monohydrochloride
MF:	$C_{21}H_{29}NO_4$ • HCl
FW:	395.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 230, 278 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

YS-035 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the YS-035 (hydrochloride)in the solvent of choice, which should be purged with an inert gas. YS-035 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of YS-035 (hydrochloride) in these solvents is approximately 5 and 1 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 YS-035 (hydrochloride) can be prepared by directly dissolving the solid crystalline solid in aqueous buffers. The solubility of YS-035 (hydrochloride) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

YS-035 is a verapamil derivative that dose-dependently blocks calcium uptake *via* Na^+/Ca^{2+} exchange in diverse types of cells (K_i = 28 µM).[1] It inhibits calcium uptake by muscle cells, brain synaptosomes, and kidney fibroblasts.[1] YS-035 also prevents calcium release from mitochondria induced by Ruthenium Red but not by uncouplers, respiratory inhibitors, or a chelating agent.[1] YS-035 is used to characterize the role of calcium currents in smooth muscle and neuronal electrophysiology.[2,3]

References

1. Deana, R., Panato, L., Cancellotti, F.M., *et al*. Properties of a new calcium ion antagonist on cellular uptake and mitochondrial efflux of calcium ions. *Biochem. J.* **218**, 899-905 (1984).
2. Kammer, T., Berger, F., Borchard, U., *et al*. Electrophysiological characterization of class III activity of a verapamil derivative in guinea-pig cardiac tissues. *Arzneimittelforschung* **43(3)**, 302-308 (1993).
3. Mironov, S.L., Langohr, K., and Richter, D.W. Hyperpolarization-activated current, Ih, in inspiratory brainstem neurons and its inhibition by hypoxia. *Eur. J. Neurosci.* **12(2)**, 520-526 (2000).

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