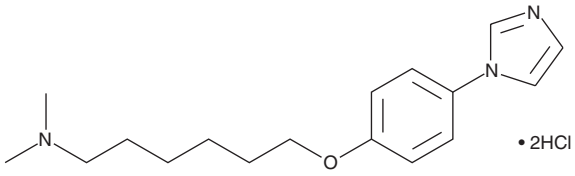
PRODUCT INFORMATION

CAY10462

Item No. 10006400

CAS Registry No.:	502656-68-0
Formal Name:	6-[4-(1H-imidazol-1-yl)phenoxy]-N,N-dimethyl-1-hexanamine, dihydrochloride
MF:	$C_{17}H_{25}N_3O$ • 2HCl
FW:	360.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 202, 246 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

CAY10462 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10462 in the solvent of choice, which should be purged with an inert gas. CAY10462 is soluble in organic solvents such as ethanol and DMSO. The solubility of CAY10462 in these solvents is approximately 10 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 CAY10462 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CAY10462 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

20-HETE is an important metabolite of arachidonic acid in the vasculature, especially in the kidney, where it is synthesized by cytochrome P450 (CYP450) enzymes of the 4A family.[1,2] Alkylaryl imidazoles have been shown to inhibit certain CYP450 enzymes, including the CYP4A enzymes associated with 20-HETE synthesis.[3] CAY10462 is a the hydrochloride salt of CAY10434 and selective inhibitor of the 20-HETE synthase CYP4A11 exhibiting an IC_{50} of 8.8 nM when tested in human renal microsomes.[4] CAY10434 is nearly 200 times less potent as an inhibitor of 1A, 1C, and 3A CYP450 enzymes.

References

1. Harder, D.R., Lange, A.R., Gebremedhin, D., *et al.* Cytochrome P450 metabolites of arachidonic acid as intracellular signaling molecules in vascular tissue. *J. Vasc. Res.* **34**, 237-243 (1997).
2. Imig, J.D., Zou, A.P., Stec, D.E., *et al.* Formation and actions of 20-hydroxyeicosatetraenoic acid in rat renal arterioles. *Am. J. Physiol.* **270**, R217-R227 (1996).
3. Nakamura, T., Sato, M., Kakinuma, H., *et al.* Pyrazole and isoxazole derivatives as new, potent, and selective 20-hydroxy-5,8,11,14-eicosatetraenoic acid synthase inhibitors. *J. Med. Chem.* **46**, 5416-5427 (2003).
4. Nakamura, T., Kakinuma, H., Umemiya, H., *et al.* Imidazole derivatives as new potent and selective 20-HETE synthase inhibitor. *Bioorg. Medicinal Chem. Letters* **14**, 333-336 (2004).

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