

PRODUCT INFORMATION



Epoxy Fluor 7

Item No. 10008610

CAS Registry No.: 863223-43-2
Formal Name: cyano(6-methoxy-2-naphthalenyl)
methyl[(2,3)-3-phenyloxiranyl]
methyl ester, carbonic acid

MF: C₂₃H₁₉NO₅

FW: 389.4

Purity: ≥98%

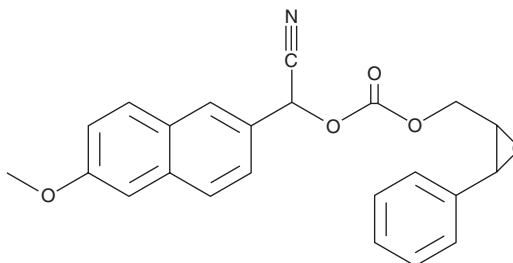
UV/Vis.: λ_{max}: 234 nm

Ex./Em. Max: 330/465 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

Epoxy fluor 7 is supplied as a crystalline solid. A stock solution may be made by dissolving the epoxy fluor 7 in the solvent of choice. Epoxy fluor 7 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of epoxy fluor 7 is approximately 5 mg/ml in ethanol and approximately 10 mg/ml in DMSO and DMF.

Description

Soluble epoxide hydrolase (sEH) catalyzes the conversion of epoxyeicosatrienoic acids (EpETrEs) to the corresponding DiHETrEs thereby diminishing their vasodilator activity.¹ Inhibitors of sEH may therefore have clinical utility for treating hypertension and systemic inflammation.^{2,3} Epoxy fluor 7 is a sensitive fluorescent substrate for sEH that can be used to monitor the activity of both human and mouse enzymes.⁴ Hydrolysis of the substrate epoxide yields a highly fluorescent product that can be monitored at excitation and emission wavelengths of 330 and 465 nm, respectively. Epoxy fluor 7 is more stable in aqueous solution and offers about 2-fold better sensitivity than previously used colorimetric substrates such as NEPC.⁴

References

1. Yu, Z., Xu, F., Huse, L.M., *et al.* Soluble epoxide hydrolase regulates hydrolysis of vasoactive epoxyeicosatrienoic acids. *Circ. Res.* **87(11)**, 992-998 (2000).
2. Imig, J.D., Zhao, X., Zaharis, C.Z., *et al.* An orally active epoxide hydrolase inhibitor lowers blood pressure and provides renal protection in salt-sensitive hypertension. *Hypertension* **46(2)**, 975-981 (2005).
3. Schmelzer, K.R., Kubala, L., Newman, J.W., *et al.* Soluble epoxide hydrolase is a therapeutic target for acute inflammation. *Proc. Natl. Acad. Sci. USA* **102(28)**, 9772-9777 (2005).
4. Jones, P.D., Wolf, N.M., Morisseau, C., *et al.* Fluorescent substrates for soluble epoxide hydrolase and application to inhibition studies. *Anal. Biochem.* **343(1)**, 66-75 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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