# **PRODUCT** INFORMATION



trans-AUCB

Item No. 16568

CAS Registry No.:	885012-33-9
Formal Name:	4-[[trans-4-[[(tricyclo[3.3.1.1 <sup>3,7</sup> ]
	dec-1-ylamino)carbonyl]amino]
	cyclohexyl]oxy]-benzoic acid
MF:	$C_{24}H_{32}N_2O_4$
FW:	412.5 <sup>2</sup>
Purity:	≥90%
UV/Vis.:	λ <sub>max</sub> : 256 nm H H Ö
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
1 6 1	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

# Laboratory Procedures

trans-AUCB is supplied as a crystalline solid. A stock solution may be made by dissolving the trans-AUCB in the solvent of choice, which should be purged with an inert gas. trans-AUCB is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of trans-AUCB in these solvents is approximately 30 and 20 mg/ml, respectively.

trans-AUCB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, trans-AUCB should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. trans-AUCB has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

# Description

Soluble epoxide hydrolase (sEH) converts epoxides to their corresponding diols. Inhibitors of sEH have anti-inflammatory, anti-hypertensive, neuroprotective, and cardioprotective effects.<sup>1,2</sup> trans-AUCB is a very potent inhibitor of sEH ( $IC_{50}$  = 0.5 nM).<sup>3</sup> It displays high oral bioavailability for doses ranging from 0.01 to 1 mg/kg.<sup>4,5</sup> Dual inhibition of COX-2 and sEH, by celecoxib (Item No. 10008672) and trans-AUCB, suppresses tumor angiogenesis, inhibiting tumor growth and metastasis in a Lewis lung carcinoma model in mice.<sup>6</sup>

# References

- 1. 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).
- 2. 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).
- 3. Hwang, S.H., Wagner, K.M., Morisseau, C., et al. Synthesis and structure-activity relationship studies of urea-containing pyrazoles as dual inhibitors of cyclooxygenase-2 and soluble epoxide hydrolase. J. Med. Chem. 54(8), 3037-3050 (2011).
- 4. Tsai, H.J., Hwang, S.H., Morisseau, C., et al. Pharmacokinetic screening of soluble epoxide hydrolase inhibitors in dogs. Eur. J. Pharm. Sci. 40(3), 222-238 (2010).
- 5. Imig, J.D. and Hammock, B.D. Soluble epoxide hydrolase as a therapeutic target for cardiovascular diseases. Nat. Rev. Drug Discov. 8(10), 794-805 (2009).
- 6. Zhang, G., Panigrahy, D., Hwang, S.H., et al. Dual inhibition of cyclooxygenase-2 and soluble epoxide hydrolase synergistically suppresses primary tumor growth and metastasis. Proc. Natl. Acad. Sci. USA 111(30), 11127-11132 (2014).

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

## SAFFTY 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.

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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