

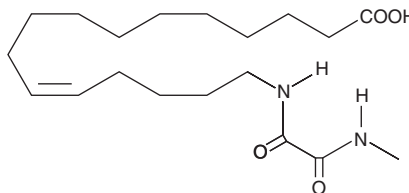
# PRODUCT INFORMATION



**CAY10665**

Item No. 11044

**CAS Registry No.:** 1235543-17-5  
**Formal Name:** 16-[[2-(methylamino)-2-oxoacetyl]amino]-11Z-hexadecenoic acid  
**MF:** C<sub>19</sub>H<sub>34</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 354.5  
**Purity:** ≥98%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

## Laboratory Procedures

CAY10665 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of CAY10665 in these solvents is approximately 30 mg/ml.

## Description

Isolated neonatal rat cardiomyocytes, which spontaneously beat in culture, are used to evaluate the antiarrhythmic effects of polyunsaturated fatty acids (PUFA).<sup>1</sup> In this model, the ω-3 PUFA eicosapentaenoic acid (EPA, 3-10 μM) reduces the contraction rate of cells, indicating a positive antiarrhythmic effect.<sup>1</sup> Cytochrome P450 metabolites of EPA are more potent, with 17,18-epoxyeicosatetraenoic acid (17,18-EET) reducing contractions at 30 nM.<sup>2</sup> CAY10665 is a bioisostere of 17,18-EET which is approximately 50% more effective at reducing arrhythmic contraction frequency, without affecting amplitude, when tested at 30 nM.<sup>3</sup> This disubstituted oxamide represents a stable analog of 17,18-EET which may be used to study the mechanism of regulation of cardiomyocyte contractility by EPA metabolites.

## References

1. Kang, J.X. and Leaf, A. Effects of long-chain polyunsaturated fatty acids on the contraction of neonatal rat cardiac myocytes. *Proc. Natl. Acad. Sci. USA* **91(21)**, 9886-9890 (1994).
2. Arnold, C., Markovic, M., Blosssey, K., et al. Arachidonic acid-metabolizing cytochrome P450 enzymes are targets of omega-3 fatty acids. *J. Biol. Chem.* **285(43)**, 32720-32733 (2010).
3. Falck, J.R., Wallukat, G., Puli, N., et al. 17(R),18(S)-Epoxyeicosatetraenoic acid, a potent eicosapentaenoic acid (EPA) derived regulator of cardiomyocyte contraction: Structure-activity relationships and stable analogues. *J. Med. Chem.* **54(12)**, 4109-4118 (2011).

### 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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