

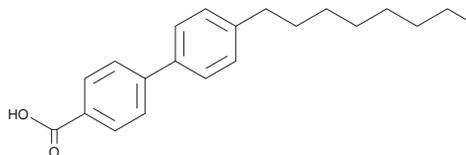
# PRODUCT INFORMATION



**AC-55649**

Item No. 43166

**CAS Registry No.:** 59662-49-6  
**Formal Name:** 4'-octyl-[1,1'-biphenyl]-4-carboxylic acid  
**MF:** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>  
**FW:** 310.4  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Synthetic



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

## Laboratory Procedures

AC-55649 is supplied as a solid. A stock solution may be made by dissolving the AC-55649 in the solvent of choice, which should be purged with an inert gas. AC-55649 is slightly soluble (0.1-1 mg/ml) in acetonitrile and chloroform.

## Description

AC-55649 is a retinoic acid receptor  $\beta 2$  (RAR $\beta 2$ ) agonist.<sup>1</sup> It selectively induces RAR $\beta 2$  activity over RAR $\alpha$ , RAR $\beta 1$ , and RAR $\gamma$  activity in functional assays using NIH3T3 cells (EC<sub>50</sub>s = 126, 2,512, 1,995, and 6,310 nM, respectively).<sup>2</sup> AC-55649 reduces the proliferation of MCF-7 breast cancer cells in a concentration-dependent manner and induces neurite outgrowth in retinoid-responsive NTERA-2 cells when used at a concentration of 10  $\mu$ M. It reduces fasting blood glucose levels in mice fed a high-fat diet as a model of type 2 diabetes.<sup>3</sup>

## References

1. Lund, B.W., Piu, F., Gauthier, N.K., *et al.* Discovery of a potent, orally available, and isoform-selective retinoic acid  $\beta 2$  receptor agonist. *J. Med. Chem.* **48(24)**, 7517-7519 (2005).
2. Piu, F., Gauthier, N.K., Olsson, R., *et al.* Identification of novel subtype selective RAR agonists. *Biochem. Pharmacol.* **71(1-2)**, 156-162 (2005).
3. Trasino, S.E., Tang, X.H., Jessurun, J., *et al.* Retinoic acid receptor  $\beta 2$  agonists restore glycaemic control in diabetes and reduce steatosis. *Diabetes Obes. Metab.* **18(2)**, 142-151 (2016).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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