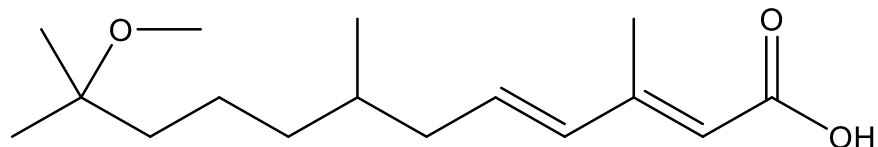


**Catalog # 10-4531**

**Methoprene Acid**

CAS# 53092-52-7

Lot # FBA6199



An analog of insect juvenile hormone which acts as an insect growth regulator. Binds directly and selectively to the retinoid X receptor (RXR) acting as a transcriptional activator in both insect and mammalian cells with no activity at RAR.<sup>1</sup> Negatively regulates thrombosis and hemostasis.<sup>2</sup> Induces neurosteroid biosynthesis in human glial GL-1 cells.<sup>3</sup> Increases the expression of the brown-fat-uncoupling-protein-1 gene (ucp-1).<sup>4</sup>

- 1) Harmon *et al.* (1995), *Activation of mammalian retinoid X receptors by the insect growth regulator methoprene*; Proc. Natl. Acad. Sci. USA, **92** 6157
- 2) Unsworth *et al.* (2017), *RXR Ligands Negatively Regulate Thrombosis and Hemostasis* ; Arterioscler. Thromb. Vasc. Biol., **37** 812
- 3) Kushida and Tamura (2009), *Retinoic acids induce neurosteroid biosynthesis in human glial GL-1 cells via the induction of steroidogenic genes*; J. Biochem., **146** 917
- 4) Alvarez *et al.* (2000), *Both retinoic-acid-receptor and retinoid-X-receptor-dependent signaling pathways mediate the induction of the brown-adipose-tissue-uncoupling-protein-1 gene by retinoids*; Biochem. J., **345** Pt 1 91

**PHYSICAL DATA**

Molecular Weight:	268.39
Molecular Formula:	C <sub>16</sub> H <sub>28</sub> O <sub>3</sub>
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO or Ethanol
Physical Description:	Colorless oil
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**