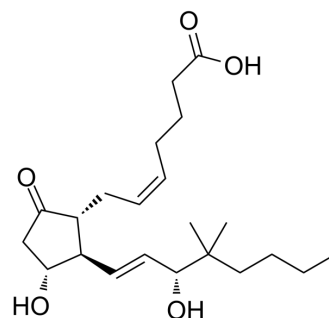


## 16,16-Dimethyl prostaglandin E2

<b>Cat. No.:</b>	HY-106420	
<b>CAS No.:</b>	39746-25-3	
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>36</sub> O <sub>5</sub>	
<b>Molecular Weight:</b>	380.52	
<b>Target:</b>	Prostaglandin Receptor	
<b>Pathway:</b>	GPCR/G Protein	
<b>Storage:</b>	Pure form	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (262.80 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.6280 mL	13.1399 mL	26.2798 mL
	5 mM	0.5256 mL	2.6280 mL	5.2560 mL
	10 mM	0.2628 mL	1.3140 mL	2.6280 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (6.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (6.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (6.57 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

16,16-Dimethyl prostaglandin E2 (16,16-dimethyl PGE2) is an orally active vertebrate Hematopoietic stem cells (HSCs) homeostasis critical regulator. 16,16-Dimethyl prostaglandin E2 can act through EP2/EP4 and has an interaction with the Wnt pathway<sup>[1][2]</sup>.

#### In Vivo

16,16-Dimethyl prostaglandin E2 (16,16-dimethyl PGE2; 10 µg/kg; i.p.; every 12 hours; for 8 days) rescues the exacerbated DSS colitis phenotype of Tpl2<sup>IMF-KO</sup> mice and restores epithelial proliferation and structure<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Tpl2 <sup>IMF-KO</sup> mice <sup>[2]</sup>
Dosage:	10 µg/kg
Administration:	IP; every 12 hours; for 8 days
Result:	Rescued the exacerbated DSS colitis phenotype and restores epithelial proliferation and structure.

## REFERENCES

- [1]. Hagedorn EJ, et al. Getting more for your marrow: boosting hematopoietic stem cell numbers with PGE2. *xp Cell Res.* 2014 Dec 10;329(2):220-6.
- [2]. Roulis M, et al. Intestinal myofibroblast-specific Tpl2-Cox-2-PGE2 pathway links innate sensing to epithelial homeostasis. *Proc Natl Acad Sci U S A.* 2014 Oct 28;111(43):E4658-67.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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