

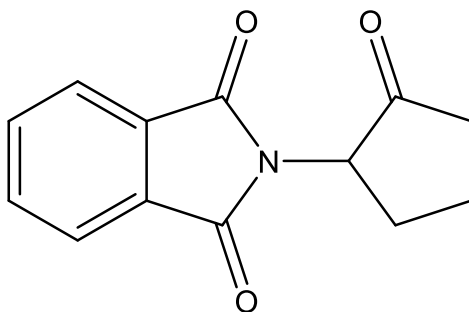
Catalog #10-5556

PNF1

CAS# 10442-95-2

2-(2-Oxocyclopentyl)isoindoline-1,3-dione; SC-3-149

Lot # S106188



PNF1 is a novel small molecule inducer of angiogenesis which has been shown to be useful in tissue engineering applications.¹ In a sustained release model, PNF1 promoted ingrowth and expansion of microvascular networks surrounding biomaterial implants.² Its mechanism of action includes induction of TNF- α followed by TGF- β signaling and subsequent modulation of MMP14 (MT1-MMP) in human microvascular endothelial cells.^{3,4}

References/Citations:

- 1) Wieghaus *et al.* (2006) *Small molecule inducers of angiogenesis for tissue engineering*; Tissue Eng. **12** 1903
- 2) Wieghaus *et al.* (2008) *Expansion of microvascular networks in vivo by phthalimide neovascular factor 1 (PNF1)*; Biomaterials **29** 4698
- 3) Wieghaus *et al.* (2008) *Novel pathway compendium analysis elucidates mechanism of pro-angiogenic synthetic small molecule*; Bioinformatics **24** 2384
- 4) Wieghaus *et al.* (2009) *Phthalimide neovascular factor 1 (PNF1) modulates MT1-MMP activity in human microvascular endothelial cells*; Biotechnol. Bioeng. **103** 796

PHYSICAL DATA

Molecular Weight:	229.24
Molecular Formula:	C ₁₃ H ₁₁ NO ₃
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (35 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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