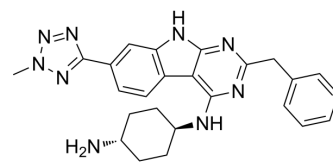


## UM171

Cat. No.:	HY-12878		
CAS No.:	1448724-09-1		
Molecular Formula:	C <sub>25</sub> H <sub>27</sub> N <sub>9</sub>		
Molecular Weight:	453.54		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 75 mg/mL (165.37 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.2049 mL	11.0244 mL	22.0488 mL
5 mM	0.4410 mL	2.2049 mL	4.4098 mL
10 mM	0.2205 mL	1.1024 mL	2.2049 mL

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

### BIOLOGICAL ACTIVITY

#### Description

UM171 is a selective agonist of human hematopoietic stem cell self-renewal. UM171 binds to hematopoietic cytokines and has the ability to promote the maintenance and expansion of human primary HSCs in vitro. UM171 can be used in the study of hematopoietic derivation of human pluripotent stem cells in vitro.

#### In Vitro

UM171 (50-100 nM) significantly increases CD34<sup>+</sup> CD43<sup>+</sup> and CD34<sup>+</sup> CD45<sup>+</sup> hematopoietic progenitors. UM171 enhances the derivation of hematopoietic cells at multiple developmental steps. UM171 enhances de novo generation of hematopoietic progenitor cells from hPSCs at multiple phases during hematopoietic differentiation in vitro. UM171 shows no effect on erythroid development, but inhibits erythroid maturation<sup>[1]</sup>. UM171 treatment enhances the engraftment potential of CD34<sup>+</sup> macaque cells by threefold. UM171 attenuates cell differentiation and promotes ex vivo expansion of primitive human hematopoietic cells, and promotes expansion of LT-HSCs. UM171 treatment results in down-regulation of AhR target genes such as CYP1B1, CYP1A1, and AhRR<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [1]. Li X, et al. Pyrimidoindole derivative UM171 enhances derivation of hematopoietic progenitor cells from human pluripotent stem cells. Stem Cell Res. 2017 May;21:32-39.
- [2]. Fares I, et al. Cord blood expansion. Pyrimidoindole derivatives are agonists of human hematopoietic stem cell self-renewal. Science. 2014 Sep 19;345(6203):1509-12.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA