



Xcess Biosciences Inc.

1804 Garnet Ave, Suite #396
San Diego, CA 92109

<http://www.xcessbio.com>

Phone: 1-858-866-8887

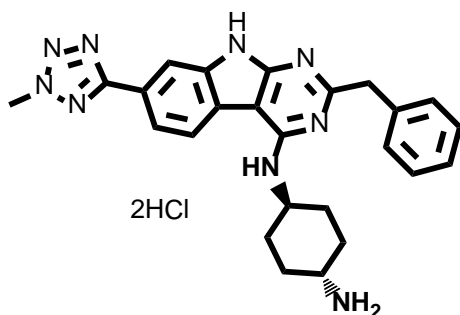
Toll free: 1-866-706-2330

Fax: 1-619-810-0718

Email: info@xcessbio.com

Human HSC Self-renewal Agonist – UM171

Chemical Name: (1*r*,4*r*)-N¹-(2-benzyl-7-(2-methyl-2H-tetrazol-5-yl)-9H-pyrimido[4,5-b]indol-4-yl)cyclohexane-1,4-diamine hydrochloride



Molecular Weight:	526.46
Formula:	C ₂₅ H ₂₉ Cl ₂ N ₉
Purity:	≥98%
CAS#:	1448724-09-1
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

UM171 is a potent small molecule that stimulates the ex vivo expansion of human hematopoietic stem cells/HSC capable of reconstituting human hematopoiesis for at least 6 months in immunocompromised mice. It attenuates cell differentiation and promotes ex vivo expansion of long-term human HSC (LT-HSC) at 35 nM in 11 days fed-batch cultures. UM171's mechanism is independent of suppression of the aryl hydrocarbon receptor (AHR) like SR1. The properties of UM171 make it a potential candidate for hematopoietic stem cell transplantation and gene therapy.

How to Use:

In vitro: For transplantation experiments, the fed-batch culture system was used. 1x10⁵ CD34⁺ cord blood (CB) cells/ml were injected into 12 ml or 25 ml bags connected to a syringe loaded pumping system and maintained on an orbital shaker at 37°C and 5% CO₂ in air. The pump was set to continuously deliver HSC expansion media supplemented with UM171 (35 nM) at a flow rate of 0.7 µl/min.

In vivo: NSG mice were injected with CD34⁺ CB cells that had been originally cultured in UM171.

Reference:

1. Fares I, et al. Cord blood expansion. Pyrimidoindole derivatives are agonists of human hematopoietic stem cell self-renewal. (2014) *Science*. 345(6203):1509-12.

Products are for research use only. Not for human use.