

Product Name: StemRegenin 1

Catalog No.: 7086

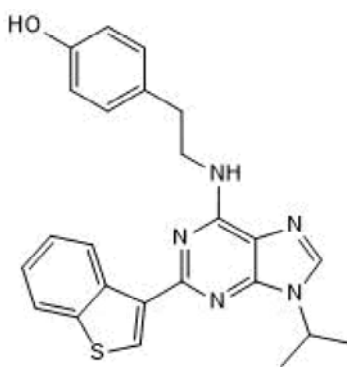
Batch No.: 2

CAS Number: 1227633-49-9

IUPAC Name: 4-[2-[[2-Benzo[*b*]thien-3-yl-9-(1-methylethyl)-9*H*-purin-6-yl]amino]ethyl]phenol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₄H₂₃N₅OS.
Batch Molecular Weight: 429.54
Physical Appearance: Beige solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.11	5.4	16.3
Found	67.15	5.47	16.23

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

StemRegenin 1 is an aryl hydrocarbon receptor (AHR) antagonist ($IC_{50} = 127$ nM). StemRegenin 1 exhibits no inhibitory activity against a panel of 61 kinases and preferentially inhibits human AHR. StemRegenin 1 promotes the expansion of CD34+ cells ex vivo. In hematopoietic stem cell (HSC) culture, the compound induces a 50-fold increase in CD34-expressing cells, and HSCs cultured with StemRegenin 1 show increased engraftment in mice. Combination of StemRegenin 1 with DMOG (Cat. No. 4408) increases the proportion of primitive HSCs and improves long-term engraftment. The product also promotes expansion of human promyelocytic leukemia cell line N... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

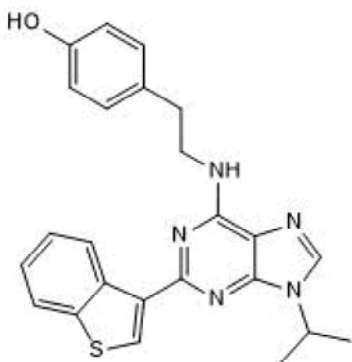
Batch Molecular Formula: $C_{24}H_{23}N_5OS$.

Batch Molecular Weight: 429.54

Physical Appearance: Beige solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Jackson et al (2017) Targeting the aryl hydrocarbon receptor nuclear translocator complex with DMOG and Stemregenin 1 improves primitive hematopoietic stem cell expansion. *Stem Cell Res.* **21** 124. PMID: 28445828.

Koide et al (2016) Aryl hydrocarbon receptor antagonist StemRegenin 1 promotes the expansion of human promyelocytic leukemia cell line, NB4. *Anticancer Res.* **36** 3635. PMID: 27354634.

Genovese et al (2014) Targeted genome editing in human repopulating haematopoietic stem cells. *Nature* **510** 235. PMID: 24870228.

Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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