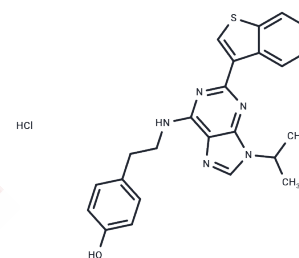


StemRegenin 1 Hydrochloride

Chemical Properties

CAS No. :	2319882-01-2
Formula:	C ₂₄ H ₂₄ ClN ₅ O ₂ S
Molecular Weight:	466
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	StemRegenin 1 Hydrochloride is an aryl hydrocarbon receptor (AhR) antagonist (IC ₅₀ = 127 nM) that inhibits RANKL-induced osteoclast generation and differentiation while promoting the expansion of multipotent haematopoietic progenitor cells derived from human embryonic stem cells (hESCs).
Targets(IC50)	AhR
In vitro	Culture of mPB CD34+ cells with cytokines plus StemRegenin 1 Hydrochloride for 7 days increased the number of CD34+, CD133+, and CD90+ hematopoietic stem and progenitor cell populations 2.6-, 2.3-, and 10-fold, respectively [1]. StemRegenin 1 Hydrochloride in the absence of cytokines did not induce proliferation, and at concentrations above 1 μM, StemRegenin 1 Hydrochloride treatment is anti-proliferative [2].
In vivo	Method: StemRegenin 1 Hydrochloride (30 μg/kg, administered three times per week, every other day, for 30 days) was intraperitoneally injected into mice that had undergone total-body irradiation (TBI) (irradiation dose 6 Gy) 4 hours prior, to investigate the radioprotective effects of StemRegenin 1 Hydrochloride on lethally irradiated mice. Results: StemRegenin 1 Hydrochloride alleviated the lethal effects and pancytopenia induced by total-body irradiation (TBI) in mice [3].

Solubility Information

Solubility	DMSO: ≤ 2.5 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1459 mL	10.7296 mL	21.4592 mL
5 mM	0.4292 mL	2.1459 mL	4.2918 mL
10 mM	0.2146 mL	1.073 mL	2.1459 mL
50 mM	0.0429 mL	0.2146 mL	0.4292 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Boitano AE, et al. Aryl Hydrocarbon Receptor Antagonists Promote the Expansion of Human Hematopoietic Stem Cells. *Science*. 2010 Sep 10;329(5997):1345-8.

Gao H, et al. Suppression of homeobox transcription factor VentX promotes expansion of human hematopoietic stem/multipotent progenitor cells. *J Biol Chem*. 2012 Aug 24;287(35):29979-87.

Hwang YJ, et al. StemRegenin 1 Mitigates Radiation-Mediated Hematopoietic Injury by Modulating Radioresponse of Hematopoietic Stem/Progenitor Cells. *Biomedicines*. 2023 Mar 8;11(3):824.

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