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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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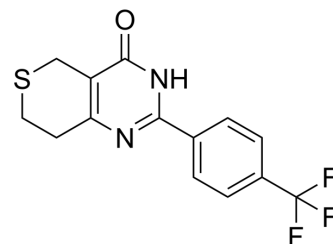
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XAV-939

Cat. No.:	HY-15147
CAS No.:	284028-89-3
Molecular Formula:	C ₁₄ H ₁₁ F ₃ N ₂ OS
Molecular Weight:	312.31
Target:	β-catenin; PARP
Pathway:	Stem Cell/Wnt; Cell Cycle/DNA Damage; Epigenetics
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 1 year -20°C 6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 15.62 mg/mL (50.01 mM; ultrasonic and warming and heat to 60°C)
H₂O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		3.2019 mL	16.0097 mL	32.0195 mL
	5 mM		0.6404 mL	3.2019 mL	6.4039 mL
	10 mM		0.3202 mL	1.6010 mL	3.2019 mL

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

In Vivo

- Add each solvent one by one: 50% PEG300 >> 50% saline
Solubility: 5 mg/mL (16.01 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 1.56 mg/mL (5.00 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 1.56 mg/mL (5.00 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: 1.56 mg/mL (5.00 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

XAV-939 is a Tankyrase inhibitor. XAV-939 has inhibitory activity for TNKS1 and TNKS2 with IC₅₀ values of 5 nM and 2 nM, respectively. XAV-939 also is an enhancer of osteoblastic differentiation of hMSCs. XAV-939 can be used for the research of conditions associated with activated Wnt signaling, such as cancer, fibrotic diseases and conditions associated with low bone formation^{[1][2][3]}.

IC ₅₀ & Target	TNKS2 2 nM (IC ₅₀)	TNKS1 5 nM (IC ₅₀)	ARTD2 479 nM (IC ₅₀)	ARTD1 5500 nM (IC ₅₀)
In Vitro	XAV-939 has activity against TNKS1 and TNKS2 with IC ₅₀ values of 5 nM and 2 nM, respectively ^[1] . XAV-939 (0.3-30 μM; 3 or 10 days) enhances osteoblast differentiation of hBMSCs ^[2] . XAV-939 (3 μM) promotes osteoblast differentiation of hMSCs via accumulation of SH3BP2 ^[2] . XAV-939 (3 μM; 10 days) upregulates the expression of OPG and downregulates the expression of RANKL in hBMSCs during osteoblast differentiation ^[2] . XAV-939 suppresses Wnt/β-catenin signaling and promotes SFRP3 and SFRP4 expression ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
	Cell Viability Assay ^[2]			
	Cell Line:	hMSC-TERT cell line		
	Concentration:	0.3, 3, and 30 μM		
	Incubation Time:	3 days		
	Result:	Showed no significant effect on proliferation at day 1, 2, and 3 at dose of 0.3 and 3 μM but inhibited hMSCs cell proliferation on day 3 at dose of 30 μM.		
	Apoptosis Analysis ^[2]			
	Cell Line:	hMSC-TERT cell line		
	Concentration:	3 μM		
	Incubation Time:	3 days		
	Result:	Showed a minute percentage of cell death (apoptosis and necrosis) in the XAV-939-treated hBMSC		
	RT-PCR ^[2]			
	Cell Line:	hMSC-TERT cell line		
	Concentration:	3 μM		
	Incubation Time:	10 days		
Result:	Upregulated gene expression of osteoblast-associated gene markers including: ALP, COL1A1, RUNX2, and OC.			
In Vivo	XAV-939 rescues mechanical stress-induced cartilage degeneration in vivo ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

CUSTOMER VALIDATION

- Nature. 2022 Jan;601(7894):600-605.
- Signal Transduct Target Ther. 2023 Feb 17;8(1):66.
- Cell Discov. 2020 Jun 9;6:35.
- Nat Metab. 2023 Jun;5(6):1014-1028.
- Sci Bull. 64 (2019) 986-997.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Mohit Narwal, et al. Discovery of tankyrase inhibiting flavones with increased potency and isoenzyme selectivity. J Med Chem. 2013 Oct 24;56(20):7880-9.
- [2]. Nuha Almasoud, et al. Tankyrase inhibitor XAV-939 enhances osteoblastogenesis and mineralization of human skeletal (mesenchymal) stem cells. Sci Rep. 2020 Oct 7;10(1):16746.
- [3]. Senxin Cai, et al. Mechanical stress reduces secreted frizzled-related protein expression and promotes temporomandibular joint osteoarthritis via Wnt/ β -catenin signaling. Bone. 2022 Aug;161:116445.
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Caution: Product has not been fully validated for medical applications. For research use only.

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