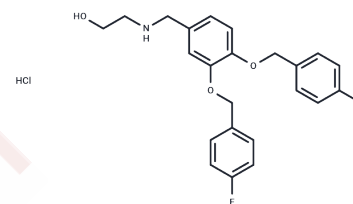


XRK3F2

Chemical Properties

CAS No. :	2375193-43-2
Formula:	C ₂₃ H ₂₄ ClF ₂ NO ₃
Molecular Weight:	435.89
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	XRK3F2 is an inhibitor of the p62-ZZ domain, blunts MM-induced Runx2 suppression in vitro, and induces new bone formation and remodeling in the presence of tumor in vivo.
Targets(IC50)	Autophagy,p62
In vitro	XRK3F2 inhibits p62-ZZ domain signaling and rescues Myeloma-induced Gfi1-driven epigenetic repression of the Runx2 gene in pre-osteoblasts to overcome differentiation suppression. XRK3F2 prevents MM-induced upregulation of Gfi1 and repression of the Runx2 gene when present in MM-preOB co-cultures. p62-ZZ-domain blocking by XRK3F2 prevents MM conditioned media and TNF plus IL7-mediated Gfi1 mRNA upregulation and the concomitant Runx2 repression. XRK3F2 decreased MM-induced Gfi1 occupancy at the Runx2-P1 promoter and prevented recruitment of HDAC1, thus preserving the transcriptionally permissive chromatin mark H3K9ac on Runx2 and allowing osteogenic differentiation[1].

Solubility Information

Solubility	DMSO: 135 mg/mL (309.71 mM),Sonication is recommended. H2O: 0.8 mg/mL (1.84 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (9.18 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2942 mL	11.4708 mL	22.9416 mL
5 mM	0.4588 mL	2.2942 mL	4.5883 mL
10 mM	0.2294 mL	1.1471 mL	2.2942 mL
50 mM	0.0459 mL	0.2294 mL	0.4588 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

Adamik J, et al. XRK3F2 Inhibition of p62-ZZ Domain Signaling Rescues Myeloma-Induced GF11-Driven Epigenetic Repression of the Runx2 Gene in Pre-osteoblasts to Overcome Differentiation Suppression. *Front Endocrinol (Lausanne)*. 2018 Jun 29;9:344.

Xu Y, Zhu C, Zhu C, et al. SQSTM1/p62 promotes the progression of gastric cancer through epithelial-mesenchymal transition. *Heliyon*. 2024

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