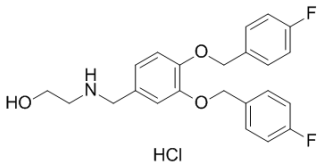
XRK3F2

Cat. No.:	HY-112904
Molecular Formula:	$C_{23}H_{24}ClF_2NO_3$
Molecular Weight:	435.89
Target:	Autophagy
Pathway:	Autophagy
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 150 mg/mL (**344.12 mM;** Need ultrasonic)
H_2O : 0.91 mg/mL (**2.09 mM;** Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

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

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.5 mg/mL (5.74 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.5 mg/mL (5.74 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.5 mg/mL (5.74 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	XRK3F2 is an inhibitor of **p62 (Sequestosome-1)-ZZ/** domain.
IC_{50} & Target	P62-ZZ domain[1].
In Vitro	The presence of XRK3F2 during MM-preOB co-cultures prevents Runx2 suppression at both d0 and d4. Furthermore, XRK3F2 blocks MM-induced upregulation of Gfi1. XRK3F2 blocks the induction of Gfi1 mRNA in BMSC in both treatment conditions. In contrast, XRK3F2 prevents both MM1.S CM and TNFα plus IL7-mediated Runx2 suppression.

Further, the pro-inflammatory and myeloma pro-survival factor IL6 mRNA is also reduced by XRK3F2 treatment. In addition, XRK3F2 also prevents TNFα-mediated upregulation of Gfi1 and rescues inhibition of Runx2 in MC4 preOB. XRK3F2 prevents MM-induced GFI1 occupancy at the Runx2-P1 promoter. XRK3F2 treatment significantly rescues the H3K9ac levels at Runx2 in MM patient hBMSC and XRK3F2 can rescue early steps in osteogenesis[1].

REFERENCES

[1]. Adamik J, et al. XRK3F2 Inhibition of p62-ZZ Domain Signaling Rescues Myeloma-Induced GFI1-Driven Epigenetic Repression of the Runx2 Gene in Pre-osteoblasts to Overcome Differentiation Suppression. Front Endocrinol (Lausanne). 2018 Jun 29;9:344.

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