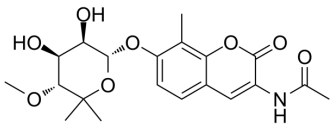
KU-32

Cat. No.:	HY-108248
CAS No.:	956498-70-7
Molecular Formula:	$C_{20}H_{25}NO_8$
Molecular Weight:	407.41
Target:	HSP
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	KU-32 is a novel, novobiocin-based Hsp90 inhibitor that can protect against neuronal cell death.
IC_{50} & Target	Hsp90[1]
In Vitro	Treating human islets with KU-32 for 24 hours shows no toxicity. With a minimum of 2-day exposure, KU-32 improves cellular viability by blocking apoptosis. Functionally, isolated human islets release more glucose-stimulated insulin when preincubate in KU-32[1]. KU-32 protects against glucose-induced death of embryonic DRG (dorsal root ganglia) neurons cultured for 3 days in vitro[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Diabetic BKS-db/db mice, a model for type 2 diabetes, administered KU-32 for 10 weeks do not show any significant changes in blood glucose and insulin levels, despite having greater insulin staining/beta cell in the pancreas compared to untreated BKS db/db mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Islets are placed into 96-well plates and subjected to a 8-point dose of KU-32 in either low (5 mM) or high (17.5 mM) glucose in DMEM : F12 media and incubated overnight at 37°C and 5% CO2. Twenty-four hours later, alamarBlue is added directly to each well to achieve a final concentration of 10% alamarBlue. Readings on a microplate reader are collected 4, 24, and 48 hours later[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration	Male and female lepr mice are used. At 10 weeks of age, animals are given once per week intraperitoneal injection of 5% Captisol or 20 mg/kg KU-32 in 5% Captisol. At termination of the study, blood from each animal is collected[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Farmer K, et al. KU-32, a novel drug for diabetic neuropathy, is safe for human islets and improves in vitro insulin secretion and viability. Exp Diabetes Res. 2012;2012:671673.

[2]. Urban MJ, et al. Inhibiting heat-shock protein 90 reverses sensory hypoalgesia in diabetic mice. ASN Neuro. 2010 Aug 11;2(4):e00040.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA