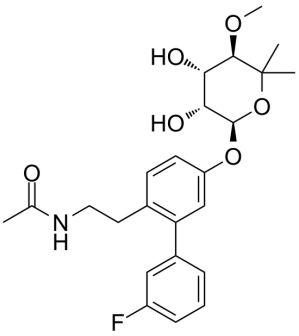
Cemdomespib

Cat. No.:	HY-145559
CAS No.:	1450642-92-8
Molecular Formula:	$C_{24}H_{30}FNO_6$
Molecular Weight:	447.5
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	Cemdomespib (KU-596) is a highly bioavailable second-generation Hsp90 modulator. Cemdomespib has shown efficacy in improving sensory deficits in models of diabetic peripheral neuropathy. Cemdomespib induces Hsp70 levels and manifest neuroprotective activity through induction of the heat shock response[1][2][3].
IC_{50} & Target	HSP90
In Vivo	After 8 weeks of diabetes, Cemdomespib (KU-596; 2, 10, or 20 mg/kg ; i.p.; administered for 6 weeks via a once per week) dose-dependently reverses the pre-existing psychosensory deficits. Cemdomespib also dose-dependently prevents the diabetes-induced deficits in motor (MNCV) and sensory (SNCV) nerve conduction velocities[1]. Cemdomespib (20 mg/kg; oral gavage once per week for 4 weeks) significantly reverses the sensory hypoalgesia in WT mice but not the Hsp70 KO mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Diabetic Swiss Webster mice [1]
Dosage:	2, 10, or 20 mg/kg
Administration:	Administered after 8 weeks of diabetes via once per week intra-peritoneal injections.
Result:	Improved diabetes induced hypoalgesia and sensory neuron bioenergetic deficits in a dose-dependent manner.

REFERENCES

[1]. Jiacheng Ma, et al. Modulating Molecular Chaperones Improves Mitochondrial Bioenergetics and Decreases the Inflammatory Transcriptome in Diabetic Sensory Neurons. ACS Chem Neurosci. 2015 Sep 16;6(9):1637-48.

[2]. Xinyue Zhang, et al. Targeting Heat Shock Protein 70 to Ameliorate c-Jun Expression and Improve Demyelinating Neuropathy. ACS Chem Neurosci. 2018 Feb 21;9(2):381-390.

[3]. Zheng Zhang, et al. Synthesis and evaluation of a ring-constrained Hsp90 C-terminal inhibitor that exhibits neuroprotective activity. Bioorg Med Chem Lett. 2018 Sep 1;28(16):2701-2704.

Caution: Product has not been fully validated for medical applications. For research use only.

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