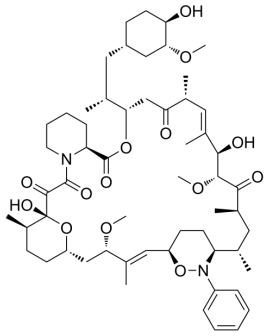
ILS-920

Cat. No.:	HY-106345
CAS No.:	892494-07-4
Molecular Formula:	$C_{57}H_{86}N_2O_{14}$
Molecular Weight:	1023.3
Target:	FKBP; Calcium Channel
Pathway:	Apoptosis; Autophagy; Immunology/Inflammation; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	ILS-920 is a nonimmunosuppressive Rapamycin analog with reduced immunosuppressive activity and potent neuroprotective activity. ILS-920 binds selectively to the immunophilin FKBP52 and to the β1-subunit of L-type voltage-gated calcium channels (VGCC). ILS-920 shows 200-fold selectivity for FKBP52 versus FKBP12[1].
IC_{50} & Target	L-type calcium channel
In Vitro	ILS-920 promotes neuronal survival and stimulates neurite outgrowth with potent neurotrophic activities in cortical neuronal cultures[1]. ILS-920 can inhibit L-type Ca^{2+} channels in rat hippocampal neurons and F-11 dorsal root ganglia (DRG)/neuroblastoma cells. ILS-920 can protect neurons from Ca^{2+}-induced cell death by modulating Ca^{2+} channels and promote neurite outgrowth via FKBP52 binding[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In a transient middle cerebral artery occlusion (tMCAO) model of ischemic stroke, ILS-920, administered 4 h postocclusion at 10 and 30 mg/kg, significantly reduces infarct volume by 24% and 23% in 72 h, respectively, and robustly enhances functional recovery measured by improvement in neurological deficits[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ruan B, et al. Binding of rapamycin analogs to calcium channels and FKBP52 contributes to their neuroprotective activities. Proc Natl Acad Sci U S A. 2008 Jan 8;105(1):33-8.

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