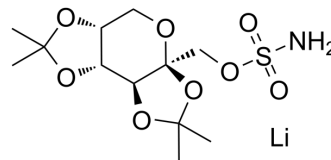


Topiramate lithium

Cat. No.:	HY-B0122A
CAS No.:	488127-53-3
Molecular Formula:	C ₁₂ H ₂₁ LiNO ₈ S
Molecular Weight:	346.3
Target:	iGluR; GABA Receptor; Sodium Channel; Calcium Channel; Potassium Channel; Carbonic Anhydrase
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Topiramate (McN 4853) lithium is a broad-spectrum antiepileptic agent. Topiramate lithium is a GluR5 receptor antagonist. Topiramate produces its antiepileptic effects through enhancement of GABAergic activity, inhibition of kainate/AMPA receptors, inhibition of voltage-sensitive sodium and calcium channels, increases in potassium conductance, and inhibition of carbonic anhydrase ^{[1][2][3]} .
In Vitro	Topiramate lithium has been believed to be a type of antiepileptic drug that blocks spread of seizures. Thus far, the mechanisms of its actions have been proven to include use-dependent inhibition of voltage-dependent Na ⁺ channels in neurons, potentiation of GABA (γ-amino-butyric acid)-induced Cl ⁻ influx, and inhibitory effects on inward currents by antagonizing kainate/alpha-amino-3-hydroxy-5-methylisoxazole-4-propionic acid (AMPA) receptors ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Anal Chem. 2020 Dec 15;92(24):15745-15756.
- ETH Zurich. 2020 Dec.
- Personalized Medicine Universe. 2019 May.

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REFERENCES

- [1]. Kaminski RM, et al. Topiramate selectively protects against seizures induced by ATPA, a GluR5 kainate receptor agonist. *Neuropharmacology*. 2004 Jun;46(8):1097-104.
- [2]. Lyseng-Williamson KA, et al. Topiramate: a review of its use in the treatment of epilepsy. *Drugs*. 2007;67(15):2231-56.
- [3]. Nakamura J, et al. Target pharmacology of topiramate, a new antiepileptic drug. *Nihon Yakurigaku Zasshi*. 2000 Jan;115(1):53-7.

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

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