PRODUCT INFORMATION



KHS-101

Item No. 37544

CAS Registry No.: Formal Name:	1262770-73-9 N ⁴ -(2-methylpropyl)-N ² -[(2- phenyl-4-thiazolyl)methyl]-2,4- pyrimidinediamine	N
MF:	$C_{18}H_{21}N_5S$	
FW:	339.5	
Purity:	≥98%	
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

KHS-101 is supplied as a solid. A stock solution may be made by dissolving the KHS-101 in the solvent of choice, which should be purged with an inert gas. KHS-101 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of KHS-101 in DMSO and DMF is approximately 10 mg/ml. KHS-101 is slightly soluble in ethanol.

Description

KHS-101 is an inhibitor of heat shock protein 60 (Hsp60), also known as HSPD1, and an inducer of neuronal differentiation.^{1,2} It inhibits the refolding activity of the complex of Hsp60 with the co-chaperone Hsp10, also known as HSPE1, in a cell-free assay (IC₅₀ = 14.4 μ M) and induces autophagy in GBM1 glioblastoma cells.² KHS-101 induces differentiation of primary rat hippocampal neural progenitor cells (NPCs) into neurons (EC₅₀ = ~1 μ M) and inhibits BMP4-induced differentiation induced of primary rat hippocampal NPCs into astrocytes when used at a concentration of 5 μ M.¹ It increases nuclear localization of the transforming acidic coiled-coil containing protein 3 (Tacc3) target aryl hydrocarbon receptor nuclear translocator 2 (Arnt2) in HEK293T cells expressing the rat proteins when used at a concentration of 5 μ M. KHS-101 reduces tumor burden and increases survival in a patient-derived xenograft (PDX) mouse model of giant cell glioblastoma.²

References

- 1. Wurdak, H., Zhu, S., Min, K.H., et al. A small molecule accelerates neuronal differentiation in the adult rat. Proc. Natl. Acad. Sci. USA 107(38), 16542-16547 (2010).
- 2. Polson, E.S., Kuchler, V.B., Abbosh, C., et al. KHS101 disrupts energy metabolism in human glioblastoma cells and reduces tumor growth in mice. Sci. Transl. Med. 10(454), eaar2718 (2018).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM