

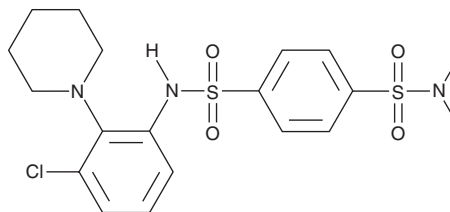
PRODUCT INFORMATION



ML-SA5

Item No. 38326

CAS Registry No.: 2418670-70-7
Formal Name: N⁴-[3-chloro-2-(1-piperidinyl)phenyl]-N¹,N¹-dimethyl-1,4-benzenedisulfonamide
Synonym: Mucolipin Synthetic Agonist 5
MF: C₁₉H₂₄ClN₃O₄S₂
FW: 458.0
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

ML-SA5 is supplied as a solid. A stock solution may be made by dissolving the ML-SA5 in the solvent of choice, which should be purged with an inert gas. ML-SA5 is soluble in the organic solvent DMSO.

Description

ML-SA5 is an agonist of transient receptor potential mucolipin 1 (TRPML1).¹ It activates whole-endolysosome TRPML1-mediated current (I_{ML1}) in isolated vacuoles that were enlarged by vacuolin-1 (Item No. 20425) ($EC_{50} = 333$ nM). ML-SA5 (3 μ M) is cytotoxic to MeWo and M12 melanoma cells but not normal melanocytes. It induces gastric acid secretion in isolated stomach from wild-type but not *TRPML1*^{-/-} mice.² ML-SA5 (2 and 5 mg/kg) decreases the necrotic area and percentage of centrally nucleated fibers in the dystrophin-deficient *mdx* mouse model of Duchenne muscular dystrophy.³

References

1. Du, W., Gu, M., Hu, M., *et al.* Lysosomal Zn²⁺ release triggers rapid, mitochondria-mediated, non-apoptotic cell death in metastatic melanoma. *Cell Rep.* **37(3)**, 109848 (2021).
2. Sahoo, N., Gu, M., Zhang, X., *et al.* Gastric acid secretion from parietal cells is mediated by a Ca²⁺ efflux channel in the tubulovesicle. *Dev. Cell* **41(3)**, 262-273 (2017).
3. Yu, L., Zhang, X., Yang, Y., *et al.* Small-molecule activation of lysosomal TRP channels ameliorates Duchenne muscular dystrophy in mouse models. *Sci. Adv.* **6(6)**, eaaz2736 (2020).

WARNING

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

SAFETY 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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/11/2023

CAYMAN CHEMICAL

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