

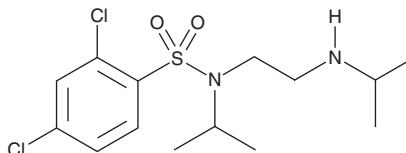
PRODUCT INFORMATION



RN-1734

Item No. 24205

CAS Registry No.: 946387-07-1
Formal Name: 2,4-dichloro-N-(1-methylethyl)-N-[2-[(1-methylethyl)amino]ethyl]-benzenesulfonamide
MF: C₁₄H₂₂Cl₂N₂O₂S
FW: 353.3
Purity: ≥98%
UV/Vis.: λ_{max}: 207, 238 nm
Supplied as: An oil
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

RN-1734 is supplied as an oil. A stock solution may be made by dissolving the RN-1734 in the solvent of choice, which should be purged with an inert gas. RN-1734 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of RN-1734 is approximately 2 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

RN-1734 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RN-1734 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. RN-1734 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

RN-1734 is a transient receptor potential vanilloid 4 (TRPV4) antagonist, blocking calcium influx induced by the TRPV4 agonist 4 α -phorbol 12,13-didecanoate (Item No. 20446) with IC₅₀ values of 2.3, 5.9, and 3.2 μ M for human, mouse, and rat TRPV4, respectively.¹ It is selective for TRPV4 over TRPV1, TRPV3, and TRPM8 (IC₅₀s = >100, >30, and >30 μ M, respectively). RN-1734 (10 μ M) reduces GSK1016790A-induced increases in glycine-activated current (I_{Gly}) from 34.5 to 0.97% in mouse hippocampal neurons *in vitro*.² It blocks arteriolar dilation induced by GSK1016790A (Item No. 17289) and increases myogenic tone in rat cremaster arterioles *ex vivo* when used at a concentration of 30 μ M.³ RN-1734 (1 mg/kg, i.p.) reduces edema and MAPK signaling induced by traumatic brain injury in rats.⁴ It also inhibits breakdown of the blood-retinal barrier in streptozotocin-induced diabetic rats when administered at a dose of 100 μ M.⁵

References

1. Vincent, F., Acevedo, A., Nguyen, M.T., *et al. Biochem. Biophys. Res. Commun.* **389**(3), 490-494 (2009).
2. Qi, M., Wu, C., Wang, Z., *et al. Cell Physiol. Biochem.* **45**(3), 1084-1096 (2018).
3. Bagher, P., Beleznai, T., Kansui, Y., *et al. Proc. Natl. Acad. Sci. U.S.A.* **109**(44), 18174-18179 (2012).
4. Lu, K.-T., Huang, T.-C., Tsai, Y.-H., *et al. J. Neurochem.* **140**(5), 718-727 (2017).
5. Arredondo Zamarripa, D., Noguez Imm, R., Bautista Cortés, A.M., *et al. Sci. Rep.* **7**(1):13094, (2017).

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, 09/16/2019

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