

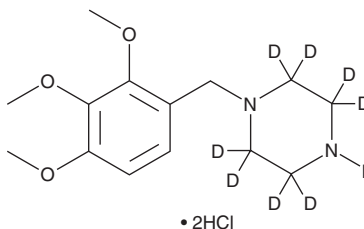
PRODUCT INFORMATION



Trimetazidine-d₈ (hydrochloride)

Item No. 39810

CAS Registry No.: 1219795-37-5
Formal Name: 1-(2,3,4-trimethoxybenzyl)piperazine-2,2,3,3,5,5,6,6-d₈, dihydrochloride
MF: C₁₄H₁₄D₈N₂O₃ • 2HCl
FW: 347.3
Chemical Purity: ≥98% (Trimetazidine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
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

Trimetazidine-d₈ (hydrochloride) is intended for use as an internal standard for the quantification of trimetazidine by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Trimetazidine-d₈ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the trimetazidine-d₈ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Trimetazidine-d₈ (hydrochloride) is slightly soluble in DMSO and methanol.

Description

Trimetazidine is a cardioprotective agent.¹ It decreases ischemia-reperfusion injury-induced pyroptosis in H9c2 rat cardiomyocytes when used at concentrations ranging from 5 to 100 μM. *In vivo*, trimetazidine (10 mg/kg) reduces cardiac TNF-α and cardiac troponin I (CTnl) levels, improves left ventricular ejection fraction, and increases survival in a rat model of ventricular fibrillation-induced post-resuscitation myocardial dysfunction.² Trimetazidine (20 mg/kg) increases overall survival, prevents neuromuscular junction degeneration, and delays motor function decline in an SOD1-G93A transgenic mouse model of amyotrophic lateral sclerosis (ALS).³ Formulations containing trimetazidine have been used in the treatment of angina.

References

1. Chen, X., Lin, S., Dai, S., et al. Trimetazidine affects pyroptosis by targeting GSDMD in myocardial ischemia/reperfusion injury. *Inflamm. Res.* **71(2)**, 227-241 (2022).
2. Li, J., Qi, Y., Wang, J., et al. Trimetazidine alleviates postresuscitation myocardial dysfunction and improves 96-hour survival in a ventricular fibrillation rat model. *J. Am. Heart Assoc.* **11(6)**, e023378 (2022).
3. Scaricamazza, S., Salvatori, I., Amadio S., et al. Repurposing of Trimetazidine for amyotrophic lateral sclerosis: A study in SOD1G93A mice. *Br. J. Pharmacol.* **179(8)**, 1732-1752 (2021).

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.

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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