Catalog # 10-4355

(R)-GNE-140

CAS# 2003234-63-5

(2*R*)-5-(2-Chlorophenyl)sulfanyl-4-hydroxy-2-(4-morpholin-4-ylphenyl)-2-thiophen-3-yl-1,3-dihydropyridin-6-one

Lot # FBS4062

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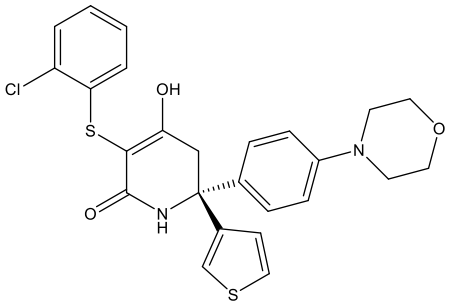

(R)-GNE-140 is a potent (IC_{50}'s: LDHA = 3 nM, LDHB = 5 nM, LDHC = 5 nM) pan-lactate dehydrogenase inhibitor.[1] It significantly decreased lactate levels in vivo, although the effects were transient. GNE-140 suppressed lactic acid production, severely stunted glucose utilization, and impeded the anaerobic glycolytic pathway in MDA-MB-231 triple negative breast cancer cells.[2]

1) Boudreau *et al.* (2016), *Metabolic plasticity underpins innate and acquired resistance to LDHA inhibition*; Nat. Chem. Biol. **12** 779
2) Mazzio (2021), *Triple Isozyme Lactic Acid Dehydrogenase Inhibition in Fully Viable MDA-MB-231 Cells Induces Cytostatic Effects That Are Not Reversed by Exogenous Lactic Acid*; Biomolecules **11** 1751

PHYSICAL DATA

Molecular Weight:	499.04
Molecular Formula:	$C_{25}H_{23}ClN_3O_3S_2$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Off-white to pale orange solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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