

Product Name: CBR-470-1

Catalog No.: 7018

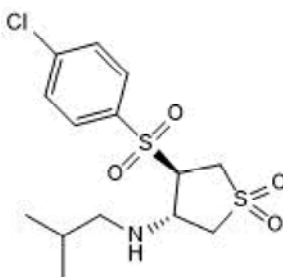
Batch No.: 1

CAS Number: 2416095-06-0

IUPAC Name: (3*R*,4*S*)-*rel*-4-[(4-Chlorophenyl)sulfonyl]tetrahydro-*N*-(2-methylpropyl)-3-thiophenamine-1,1-dioxide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₂₀ClNO₄S₂.
Batch Molecular Weight: 365.89
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 20 mM
Storage: Store at -20°C
Batch Molecular Structure:



(and enantiomer)

2. ANALYTICAL DATA

HPLC: Shows 99.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	45.96	5.51	3.83
Found	46.17	5.53	3.82

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

CBR-470-1 is a phosphoglycerate kinase 1 (PGK1) inhibitor. CBR-470-1 promotes accumulation of the reactive metabolites methylglyoxal (MGO) resulting in KEAP1 modification and dimerization, which in turn leads to activation of the Nrf2 transcriptional program. CBR-470-1 protects SH-SY5Y neuroblastoma cells from MPP⁺-induced cytotoxicity via the Keap1-Nrf2 cascade.

Physical and Chemical Properties:

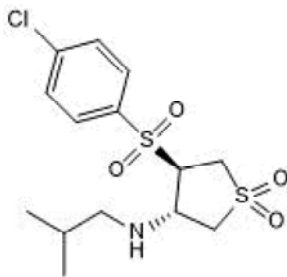
Batch Molecular Formula: C₁₄H₂₀ClNO₄S₂.

Batch Molecular Weight: 365.89

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



(and enantiomer)

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 20 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Zheng et al (2020) PGK1 inhibitor CBR-470-1 protects neuronal cells from MPP⁺. Aging (Albany NY) **12** 13388. PMID: 32649311.

Bollong et al (2018) A metabolite-derived protein modification integrates glycolysis with KEAP1-NRF2 signalling. Nature **562** 600. PMID: 30323285.

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